

**School of Math, Science and Technology  
Small Learning Community Plan**

**Fairfax High School  
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## **1. Vision and Identity.**

The School of Math, Science and Technology (SMST) is a small learning community dedicated to providing a diverse student body with an outstanding liberal arts high school education with emphasis on mathematics, science, and technology. One of the goals of the school is to increase the number of underrepresented students (women, minorities and economically disadvantaged) applying to science majors at universities. The others are to decrease the drop-out rate and to ensure that every student is graduating on time satisfying the A-G requirements.

By 2007/2008 we will be a school with approximately 500 students grades 9-12 with an administrator in charge, a counselor and a lead teacher, who will be elected following the provisions of the UTLA contract. These leaders will be responsible for the preparation of the master schedule, the budget and student programming as well as creating school wide policies dealing with student behavior and safety issues and communicating with the Fairfax School Site Counsel. Working with teachers, parents, Local and Central District administrators the administrator in charge and the lead teacher will prepare an annual budget that will identify needs and recommends allocations based on the vision and objectives of the school.

Teachers in all classes will create a rigorous, culturally relevant standards based curriculum where students acquire a strong academic foundation that can be applied to the real world. We will use multiple forms of standard based assessments, including district mandated periodic assessment, project-based authentic assessment and a variety of writing and reading assessments to ensure satisfactory progress of our students. We expect students graduating from SMST to have a strong character develop sense of civic responsibility and assume leadership positions in an increasingly scientific and technology based society.

All students will be programmed to satisfy A-G requirements and the expected learning results will be clearly communicated to the students through implementation of a personal learning plan. The plan will be created in their freshman year by the counselor according to the vision of our school. We will offer a number of elective classes specific to SMST, such as computer science, environmental science and incorporate these in the master schedule. We are in the process of identifying a contiguous space at Fairfax High School for the location of the school. Our students will take at least two thirds of their classes at SMST and the rest might be taken out of SMST.

To further increase our students' growth we will establish partnerships with the outside community. They include community members of both the city of West Hollywood and Los Angeles. We will explore volunteer and internship opportunities with the assistance of local employers and collaborate with colleges and universities to further our students' awareness of possible career paths. For example, we will be a part MESA (Mathematics Engineering Science Achievement) program at UCLA that serves educationally disadvantaged students with the goal of increasing their the participation in math, science and engineering.

Parental involvement is an important part of our vision and we will have regular meetings with parents four times per school year to discuss students' progress toward the satisfaction of the graduation requirements and their post secondary goals. We plan on creating a Parent Advisory Committee that will meet twice a year to discuss our progress in implementing the vision of SMST and to evaluate and make changes to the ongoing plan. Parents will also have an opportunity to attend special presentations that will be planned as a part of SMST parent night and we will communicate with them using the school website and the school quarterly newsletter.

SMST will infuse technology into instruction through the use of LCD projectors, smart boards and the use of computer software. We will utilize programs such as Carnegie Cognitive Tutor to allow teachers and students to use technology in instruction and learning. Our teachers will be trained in effective use of technology as a part the professional development program.

SMST faculty will also work with the students to redesign the facilities assigned to the school, create a logo and to display student work

Guiding principles of SMST:

- To create an academic culture that respects and celebrates student's uniqueness, and requires students' best effort in order to succeed.
- To create academic program centered on the belief that students need strong academic foundation in all disciplines to engage in rigorous project based work.
- To achieve student mastery in a set of core performance standards writing, reading, math, science, critical thinking and technology that will enable students to be successful in college and professional life.
- To build thinkers who have the skills to solve problems through the ability to understand, analyze and synthesize ideas and knowledge.
- To assess student learning in ways that challenges students to demonstrate mastery in a variety of forms and methods.
- To build a common understanding that each student is a part of a community.
- To build a student body that embraces the challenges of gender, race and economic diversity.
- To have students effectively use technology as a tool to enhance learning and to integrate it across disciplines.
- To encourage parents to partner with the SMST and to play significant role in the daily lives and work of their children.

- To create a community of learners where every child is known and supported to achieve its full potential.
- To create an advisory where each student has personalized adult guidance and understands his/her unique place in larger school community.

## 2. Rigorous Standard-Based Curriculum, Instruction and Assessment

The School of Science and Technology will offer a rich, standards based, dynamic curriculum designed to fulfill A-G requirements, to challenge each of its students, and to prepare them to attend and succeed in a four year college. We will use cross-curricular and vertical teaming, technology, project-based learning, community service and advisory program as means to achieve our goals.

SMST is exploring an advisory model at all levels which will enable students and staff to come together to discuss issues of the day, work related to grade level and to further develop a mutual understanding, care and concerns. The advisories will allow students to articulate their postsecondary goals to their parents, teachers and community and gives them an access to an adult mentor and a role model. As our teachers assume the role of advisor, they have the opportunity to nurture and develop a close relationship with a small group of students. In most cases, these students will be with them in advisory for four years.

To meet the different needs of our students SMST will be composed of two academies: Prep Academy (grades 9-10), and the Senior Academy (grades 11-12).

### Prep Academy:

During 9<sup>th</sup> and 10<sup>th</sup> grade students will get strong liberal arts foundation. The academic program focuses on content and skills development centered on standards in preparation for the Senior Academy. Students are challenged to develop key skills in math, science, reading, writing, critical thinking and technology.

### Sample curriculum:

Freshmen/Sophomore and Junior/Senior Advisory is made up of the SMST counselor and a team of SMST teachers. We are looking at using a portion of time designated for Sustain Silent Reading to be used as an advisory period to direct students and discuss any issues that may arise during the course of the year.

### \*First level of the Prep Academy:

Freshmen Advisory is created to meet the needs of incoming ninth grade students. An advisor (teacher/counselor) and upper classmen mentor will provide support to assist in the transition to the secondary school community.

### \*The classes include (9<sup>th</sup> Grade)

English 9A

Health and Life Skills

Biology AB\*

Integrated Coordinated Science

Foreign Language or Fine Art Algebra 1AB, Algebra 2AB or Geometry AB

Physical Education 1AB

### \*Second level of the Prep Academy

Sophomore Advisory will provide further support the growth student.

The Tenth grade student has slightly different needs and it is essential to guide and prepare them for the Senior Academy. They will be also taking CAHSEE Preparation classes.

The classes include (10<sup>th</sup> Grade)

World History AB	English 10AB
Foreign Language	
Biology AB or Chemistry AB	Physical Education 2AB
AP Biology	Geometry AB or Algebra 2AB

(Prerequisite: Chemistry)

Senior Academy:

In the 11<sup>th</sup> and 12<sup>th</sup> grades, students progress to more advanced work. This entails evaluating and auditing passed credits and taking on challenging course work. The Eleven Grade is a critical period for SMST student due to the transition from Prep Academy to Senior Academy and preparing to take SAT (*and fulfilling CAHSEE requirement*). Intervention CAHSEE Preparation and SAT Preparation Classes are available through the after school tutoring sessions, and partnerships with outside organizations.

Sample curriculum:

\*First Level of the Senior Academy

US History AB or AP US History

(Prerequisite: teacher approval)

AP Chemistry or Physics AB, Chemistry AB

(Prerequisite: Chemistry)

AP Physics (Prerequisite: Physics)

Contemporary Comp/ American Lit

Foreign Language

Algebra 2AB or Trig/Math Analysis

Fine Arts or SMST Elective

or AP Environment Science/Physiology

(Prerequisite: Biology & Chemistry)

or AP English Language

\*Second Level of the Senior Academy

Government and Economics

(Prerequisite: teacher approval)

AP Chemistry or Physics AB, Chemistry AB

(Prerequisite: Chemistry)

AP Physics (Prerequisite: Physics)

Contemporary Comp/ American Lit

Foreign Language

Algebra 2AB or Trig/Math Analysis

Fine Arts or SMST Elective

or AP Environment Science/Physiology

(Prerequisite: Biology & Chemistry)

or AP English Language

During articulation between the school and the feeder schools, the SMST counselor will provide students with a comprehensive academic plan for entering ninth graders aligned with the vision of the school. At the fifth and fifteenth week, the academic plan will be assessed with the student and the counselor or advisor to ensure that the student is on track and the proper programming has been made. The purpose of this assessment is also to determine if intervention will be needed. Progress reports will notify parents of student progress.

The standards based curriculum will prepare students to pass California High School Exit Exam and lead students to proficiency on the California Standards Test. The staff of SMST will implement instructional strategies and practice that will ensure that different learning styles will be addressed. All subgroups (ELL, Spec Ed, RSP, SDP, Gifted and Talented, English only, Boys, Girls, Hispanic, African – American) will receive differentiated instruction including Specially Designed Academic Instruction in English (SDAIE), scaffolding, reciprocal teaching and other research based teaching strategies.

It is our goal to ensure that all students are properly placed in classes. For example, to ensure proper placement in math classes at the beginning of each school year students will take UCLA Algebra 1 or 2, Geometry or Trigonometry readiness test to ensure a proper placement and to see if there is a need for an intervention.

SMST will implement the following intervention strategies for struggling students in math and English:

All ninth grade students struggling with Algebra 1, and/or scoring bellow or far bellow basic on California Standards Test will be placed in math essential class. This will be double-block class designed to provide additional instruction in basic math. We will utilize peer math tutoring after school program to provide one-on-one support. Students falling behind in essential math class will be provided more opportunities through coordination of summer school, Saturday school and after school programs. We will also provide CAHSEE preparation classes in English and math.

All ninth grade students will be tested using Gates McGinitie reading test and if they score significantly bellow their grade level will be placed in a Developing Readers and Writers Course (DRWC) for two periods a day.

Students with special learning needs will be supported by the classroom teachers and special education staff. We will provide all necessary support to special needs students as specified in IEP plans. For example, we will work closely with the special education department to pair a regular and resource teachers to co-teach mainstreamed classes and will create a professional development program to make sure that our teachers are well versed in understanding IEP.

All students with home language other than English will be tested in reading, writing and math to be placed in appropriate class. Students will have an opportunity to passport out to bilingual math classes at other SLC if such classes will not be available at SMST.

All teachers at SMST are/or will be trained during a professional development in an effective utilization of SDAIE learning techniques in order to provide an instruction for EL students. We expect all teachers to have CLAD credential or to be in process of obtaining one. We will work collaboratively with the literacy coach and ELL office to place students in appropriate classes.

We believe in community service and advisory program are some other methods that will help in achieving our goal of equity and rigor. We are looking to pair new teachers with experienced teachers so they will meet regularly to design standard-based lessons. All staff will participate in school-wide professional development.



Teachers at SMST will utilize multiple forms of student assessment to measure student progress toward meeting or exceeding state content and performance standards. For example, quarterly progress reports, periodic assessments in mathematics, English/language arts and science, weekly teacher tests, portfolio and student-designed projects. A minimum of one rigorous, standards-based activity each week per subject adds to a complete evaluation process.

We will create a master schedule that will allow teachers to meet during common conference period to analyze student work and data results. Teachers will look at school and the district data results from periodic assessments and California Standards Tests to identify standards that will need to be revisited.

SMST will infuse technology into instruction through the use of LCD projectors, smart boards and the use of computer software. We will utilize programs such as Carnegie Cognitive Tutor to allow teachers and students to use technology in instruction and learning. Our teachers will be trained in effective use of technology as a part the professional development program.

### **3. Equity and Access.**

The SMST is committed to providing a standard-based, culturally relevant education program in which all students are given the opportunity to meet graduation requirements and A-G requirements for a college admission. We are in the process of identifying a contiguous space at Fairfax High School for the location of SMST where students will take at least 2/3 of their classes.

Our school has an open and inclusive admission policy aimed at eliminating the achievement gap between groups of students and will maintain an open and inclusive enrollment policy based on students' preference with an agreement with the unifying vision of the academy. The recruitment process for SMST will start with the articulation of incoming 9<sup>th</sup> graders. The counselor visit local middle schools to create preference sheet where the students with the assistance of their parents rank top three choices of Small Learning Communities at Fairfax High School. We will make every effort to accommodate each student's preference based on the equal distribution and balance of students.

After the recruitment has been completed, students, parents and counselors will work together to create and revise a personal academic program. This program will be designed to meet the goals and parental desires of the student. Additionally, passport for students to take classes at other SSLCs will be offered if needed. We will, as a part of the curriculum offer and support participation in Advanced Placement and/or honors classes for all students.

SMST will implement the following intervention strategies for struggling students in math and English:

All ninth grade students struggling with Algebra 1, and/or scoring bellow or far bellow basic on California Standards Test will be placed in math essential class. This will be double-block class designed to provide additional instruction in basic math. We will utilize peer math tutoring after school program to provide one-on-one support. Students falling behind in essential math class will be provided more opportunities through coordination of summer school, Saturday school and after school programs. We will also provide CAHSEE preparation classes in English and math.

All ninth grade students will be tested using Gates McGinitie reading test and if they score significantly bellow their grade level will be placed in a Developing Readers and Writers Course (DRWC) for two periods a day.

Students with special learning needs will be supported by the classroom teachers and special education staff. We will provide all necessary support to special needs students as specified in IEP plans. For example, we will work closely with the special education department to pair a regular and resource teachers to co-teach mainstreamed classes and will create a professional development program to make sure that our teachers are well versed in understanding IEP.

All teachers at SMST are/or will be trained during a professional development in an effective utilization of SDAIE learning techniques in order to provide an instruction for EL students. We expect all teachers to have CLAD credential or to be in process of obtaining one. We will work

collaboratively with the literacy coach and ELL office to test and to place students in appropriate English classes.

The SMST will utilize school and the district disaggregated data to guide instruction and to modify plans. Data analysis will be conducted using data from multiple assessments: cumulative records, transcripts, California Standards Test scores, CAHSEE scores, periodic assessments, progress reports, and other placement tests. The leadership team will meet at least twice per year to review the disaggregated student outcome data and will modify the plans as appropriate.

In order to ensure educational equity and access to curriculum for all students we will train teachers at SMST in the use of a variety of strategies to address different learning styles and multiple intelligences. These strategies include differentiated instruction, SDAIE techniques and the use of Blooms Taxonomy.

#### **4. Personalization.**

SMST believes that a part of transition into small learning communities is developing personal relationships where students, teachers, parents, and others become known to each other in ways that improve learning. This personalization is one of the most important parts of building a sense of community among students and teachers. In order to accommodate the academic needs of the students at SMST during articulation between the school and the feeder schools, the counselor will provide students with a comprehensive academic plan for entering ninth grader aligned with vision of the school. Each quarter the plan will be revised to ensure proper progress and programming of the student. Once a year the plan will be revisited and based on the input from the student, parent and student data appropriate adjustment will be made.

The teachers at SMST will be trained in the use a variety of strategies to address different learning styles and multiple intelligences. These strategies include differentiated instruction, SDAIE techniques and the use of Blooms Taxonomy.

Prior to becoming a part of SMST students will be asked to indicate their preference for one of the five small learning communities at Fairfax High School. Based on their interest they will rank their top three options. We will make every effort to give students the top choice. All incoming 9<sup>th</sup> grade students will be required to attend an orientation assembly for students and their families where we will communicate the vision, core values, rules, regulations and academic expectations at SMST.

Sharing information among all stakeholders will be implemented through internet faculty site, quarterly newsletter and parent meetings held twice per school year. This will allow us to share information and communicate in a timely manner, keeping all stakeholders up to date on upcoming events and deadlines. Parent conferences, workshops, open house, back-to-school night, orientation and required graduation meetings will be scheduled to increase outreach between the school and the community.

Students at SMST will have access to educational opportunity after the school hours. For example all students will have an opportunity to participate in the Beyond the Bell Program, which offers classes after school, and on Saturdays. Students will also have an opportunity to broaden their educational experience in programs sponsored by UCLA and CSUN such as MESA.

SMST is exploring an advisory model at all levels which will enable students and staff to come together to discuss issues of the day, work related to grade level and to further develop a mutual understanding, care and concerns. The advisories will allow students to articulate their postsecondary goals to their parents, teachers and community and gives them an access to an adult mentor and a role model. As our teachers assume the role of advisor, they have the opportunity to nurture and develop a close relationship with a small group of students. In most cases, these students will be with them in advisory for four years.

## **5. Accountability and distributed leadership.**

The staff of SMST understands the importance of collaboration and team work in all aspects of school life and believes that accountability is the responsibility of all members of the community, students, teachers and parents.

By 2007/2008 we will be a school with approximately 500 students grades 9-12 with an administrator in charge, a counselor and a lead teacher, who will be elected following the provisions of the UTLA contract. These leaders will be responsible for the preparation of the master schedule, the budget and student programming as well as creating school wide policies dealing with student behavior and safety issues and communicating with the Fairfax School Site Counsel. Working with teachers, parents, Local and Central District administrators the administrator in charge and the lead teacher will prepare an annual budget that will identify needs and recommends allocations based on the vision and objectives of the school. These two individuals will also manage day to day operations of the school, working toward a positive, safe and successful educational experience for students, parents, and staff.

SMST distributes its leadership roles through a voluntary and/or electoral process. Leadership roles include: Lead Teacher, Design Team, Technology Coordinator and Data Team. Each leadership position is clearly defined by guidelines determined by the staff of the learning community and the administration of the school. We also expect a development of a Student Leadership Team and a Parent Advisory Board in order to incorporate the opinions of students and parents in future decision making in order to ensure equitable and fair inclusion of all stakeholders.

At weekly meetings, teachers will be provided with student data from the larger school and SMST generated data. This data analysis will allow us to adjust curriculum, if needed, and to make decisions on allocation of resources based on student needs.

Sharing information among all stakeholders will be implemented through internet faculty site, quarterly newsletter and parent meetings held twice per school year. This will allow us to share information and communicate in a timely manner, keeping all stakeholders up to date on upcoming events and deadlines.

The vision of SMST and the general implementation plan will be reviewed biannually by all stakeholders and revisions will be made.

## **6. Collaboration, Parent & Community Involvement.**

The teachers at SMST believe that personalized and relevant curriculum is a foundation of our learning community and therefore they are dedicated to regular collaborative meetings that allow the adaptation of a successful program being developed. The long-term instructional goal is to create an interdisciplinary curriculum with specific lesson plans and assessments that will clearly articulate to students, parents and the administration the content of our program.

We also believe that parents play an important role in development and support of our school. Recognizing the wealth of international diversity in the Fairfax student body itself, the school will help students and parents to share their knowledge of the world, languages and cultures.

Parental involvement is an integral part of our vision and therefore we will have regular monthly meetings with parents where we will discuss student's progress toward the satisfaction of the graduation requirements, post secondary goals and a development of curriculum aligned with the vision of our school.

We will maintain an open-door policy in regard to parents. Parents are always welcome to visit classrooms, confer with the counselor, staff, or administrator about specific educational needs of the students, or to share ideas and concerns. Parents are also always invited to be a part of school-wide events. We plan to host a yearly multicultural luncheon, where parents and families can showcase their academic achievements.

Our vision is also to create a partnership with employers and local universities through internships and field trip that will expose our students to potential career paths. We will regularly invite members of the community and the academic institutions to be guest speakers at SMST to share their experiences and to be role models for our students.

All members of the SMST, teachers, counselors, student and parents are included in the decision-making process and successful implementation of the program. The SLC team will have equal and unrestricted access to the staff/community room. We see the staff/community room as a site at which teachers and parents can express their ideas, concerns, and share the best practices.

To further increase our students' growth and development partnerships will be established with our outside community. They include community members of both the city of West Hollywood and Los Angeles. We will explore internship and volunteer opportunities with the assistance of local employers. Our outside communities are eager to share their talents and abilities with our school therefore we are open to augment our curriculum and create more activities and presentations to further our students' awareness. We are also eager to collaborate with colleges and universities to round out our learner's secondary school careers.

Teachers will collaborate in lesson planning to facilitate cross-curricular connections and real life applications of curriculum in order to further our learners' understanding. Teachers will meet regularly to review students work and discuss their progress. Standard-based projects and cross-

disciplinary project will also be used evaluate student understand and based on a common set of rubrics.

At the end of the school year we will evaluate the data from California Standardized Tests, High School Exit Exam, the discipline and the educational goal of SMST with the input from parents and the staff. This analysis will allow us to re-evaluate the vision and educational strategies at SMST and make proper adjustments.

## **7. Professional development.**

The SMST will use professional development time to provide teachers with opportunities to reflect and to improve practice in the classroom and as an active leader of the school. Professional development time will be divided into blocks that will address instructional collaboration, data analysis, assessment, leadership training and community outreach. In the developmental stage of the SMST the professional development time will be dedicated to training teachers to be effective advisors and the development of the curriculum that will reflect the vision of our school. In the later stages the professional development will focus more on the revision of strategies for improving academic program.

Meetings will be held once a week, (subject to funding) in which students will be placed on a modified schedule to allow for faculty collaboration. Teachers will meet in classrooms to discuss students and their work and to plan and implement lessons and educational strategies.

During SMST professional development, teachers will develop standards-based lessons and rubrics to be shared in all content areas. Team building strategies will be embedded through cooperative grouping and teacher partnership. We will create a Professional Development Team consisting of the principal, lead teacher and representatives from departments. This team will meet bi-weekly and will be primarily responsible for collaborating with the SMST community to identify professional development agendas. The meetings will be publicized and open to all staff and parents.

Staff members will regularly reflect on their teaching practices, student work, student and parent concerns by analyzing lessons. Through professional development, teachers will support each other in creating a personalized, rigorous curriculum that will enable students to succeed.

In reviewing student data, the SMST is committed to school improvement by implementing on-going self-reviews on instructional and procedural practices in the classroom. Instructional methods will be researched and combined with pedagogical practices to create a personal education for students. We will examine CASHEE scores, CST scores, teacher generated classroom assessments to identify the strength and weaknesses of the program and to make mid-course corrections and adjustments. .

The SMST will align the professional development goals with those of the larger school and LAUSD. A school site literacy coach, math and science coaches will provide assistance to the faculty to support them in delivering rigorous standard based instruction and to provide support in instructional experimentation. Professional development time will be equally allocated to both the departments and the SMST.