Charter Petition Submitted to the Board of Education of the Los Angeles Unified School District

Request for Five-Year Term

July 1, 2012 to June 30, 2017
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LOS ANGELES UNIFIED SCHOOL DISTRICT
Charter Schools Office

Letter of Intent to Apply for a Charter School

Name of proposed charter school: MATH AND SCIENCE COLLEGE PREPARATORY

General location of proposed charter: Koreatown Region of Los Angeles, CA

Projected grade levels: 9-12

Projected enrollment: 500

Lead Petitioner Information:

Name: Emilio Pack
Address: 1524 Loma Drive, Hermosa Beach, CA 90254

Phone number(s): 310-963-7373

Fax: 

E-mail address: Emilio.pack73@gmail.com

Other members of the Charter Development team

Janette Rodriguez
Carmen Vazquez

Certification:

I/we certify that we are interested in applying for a charter school within LAUSD boundaries.

I/we have participated in the Orientation Meeting given by the LAUSD Charter Schools Division.

Print Name ____________________________ Signature __________ Date __________

Received by:

Print Name ____________________________ Signature __________ Date __________
Name of Organization
Math and Science College Prep (MSCP) is seeking a 5-year term for the initial charter petition (2012-17).

Grades Served and Projected Enrollment
Math and Science College Prep (MSCP) will be a 9th - 12th grade charter high school of approximately 520 students at maximum capacity in year 4, but level off at 500 students in year 5. It will begin with 145 students in grade 9 during the first year of operation and will add a grade level each year until capacity is reached.

<table>
<thead>
<tr>
<th>Year</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 9</td>
<td>145</td>
<td>125</td>
<td>125</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td>Grade 10</td>
<td>145</td>
<td>125</td>
<td>125</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td>Grade 11</td>
<td></td>
<td>145</td>
<td>125</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td>Grade 12</td>
<td></td>
<td></td>
<td>145</td>
<td>125</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>145</td>
<td>270</td>
<td>395</td>
<td>520</td>
<td>500</td>
</tr>
</tbody>
</table>

Location Address or Target Neighborhood
MSCP intends to serve students in the 9th through 12th grades, primarily residing in the Koreatown/Mid-Wilshire area of Los Angeles. The school will serve similar demographics to those of Los Angeles SH, Belmont SH, and West Adams Prep. MSCP anticipates, after a targeted recruiting campaign, the student population will be representative of the local demographics in the area, and consistent with existing public high schools in the area. Based on statistics from the California Department of Education on local public schools, (http://dq.cde.ca.gov/dataquest/), MSCP estimates that 90-95% of the students will qualify for free/reduced lunch. In addition, the school will serve a sizable English Language population, likely 34-38% of the student body, which is again consistent with the demographics of Los Angeles Senior High School, Belmont SH, and West Adams Prep.

Facility Status / Location
MSCP will be located in Koreatown section of Los Angeles. An exact address is still to be determined. MSCP is currently surveying properties in the Koreatown region. At a minimum, MSCP is to lease a facility of no less than 15,000 sq ft for its first year of operation. MSCP will seek a facility with at least 6 classrooms, a multi-purpose room, a kitchen, administrative space, a room for a Parents Center, a room for a Teachers Center, and adequate restrooms for its first year of operation. Ideally, the facility will be located near a public park, which will be used for physical education activities, and near major public transportation terminals. In terms of a long-term site, MSCP plans to identify a site that has at least 45,000 Sq. ft. of space, with at least the same features as described above, but of course with more classrooms (approximately 24) to accommodate the student body at full capacity. MSCP also submitted an application for Proposition 39 facilities.

Prop. 39 - Application Submitted?
Yes. A Proposition 39 Application was submitted to LAUSD prior to the November 1, 2011 deadline.

Serving Board Policy
The Math and Science College Prep meets LAUSD Board policy, serving students in overcrowded, low-performing school areas; Los Angeles Senior High School, Belmont SH, and West Adams Prep. are program improvement schools and have large student enrollments. The RFK/Ambassador Schools have API scores under 700.

Board of Directors
The Math and Science College Prep Board of Directors, in accordance with its adopted corporate bylaws, will govern Math and Science College Prep in a manner consistent with the terms of this charter.
The Board of Directors, which will expand to include representatives from the business community, the education community, and the philanthropic community, will provide external accountability, oversight and guidance to ensure the school’s ongoing success. It will meet regularly to review Math and Science College Prep’s achievements and to provide support in achieving short-term and long-term goals set by the board.

**Mission**
The mission of the Math and Science College Prep is to operate a small, high performance school that will prepare all students to succeed and graduate from college.

**Vision**
The vision of the Math and Science College Prep is to create a highly accountable model of innovation with highly qualified teachers guided by core principles that are based on what research has shown to be best educational practices and to serve as a research and development model for the District and other public schools.

**Source of Money**
MSCP will be funded primarily by state and federal monies, allocated by an Average Daily Attendance formula. For start-up costs, MSCP has applied for a $350,000 grant from Partners for Developing Futures and received $30,000 grant from the Walton Family Foundation. An additional $210,000 from the Walton Family Foundation could be expected by spring of 2013. If the MSCP charter is approved by LAUSD, MSCP will also receive the California State start-up funding, provided by the California Department of Education.

**4 Top Leaders**
- **Emilio Pack (Lead Petitioner)**-Former Principal and Director of New School Development for Alliance College-Ready Public Schools and current professor at Loyola Marymount University and administrator of the Charter School Leadership Academy and specialized administrative credential/masters degree program in charter school administration.
- **Janette Rodriguez (Lead Petitioner)**-Principal of Dr. Olga Mohan High School, the 2010 California Charter School Association School of the Year and 2009 Alliance College-Ready Public School Principal of the Year.
- **Carmen Vazquez**-Principal of Alliance College-Ready Academy High School #16, veteran educator, and an expert in EL instruction.
- **Andrew Kubasek**- Accountant and Credit Collection specialist for Quinn Emanuel Law Firm. Mr. Kubasek manages a portfolio of accounts that totals at $46,000,000 and brings expertise in budget management and development.

**Has your charter applied to any other jurisdiction for approval?**
The Math and Science College Prep has not applied to any other jurisdiction for charter approval.

**Are there sister schools?**
It has no sister schools.

**Innovative Elements and “Best Practices”**
The MSCP educational model will have many innovative features, including those outlined below.

**Teacher Leaders:** MSCP will recruit experienced and accomplished teachers that will be charged with building a department for each content area. These “teacher leaders” will train newer teachers and lead demonstration classes in the future. The school believes that providing a career ladder and leadership opportunities to teachers will strengthen MSCP’s teaching corps in the long term.

**Sophisticated, User-Friendly Data Analysis Tools:** The latest technology tools will be utilized to help teachers efficiently gather and analyze data regarding student achievement. Features will likely include:
- Real-time feedback through individual student response systems;
- A comprehensive user-friendly student data management system that will include individual learning plans for all students; and
- Electronic assessment tools to reduce teacher grading time and provide faster feedback to students.

**Standards-based Grading:** Through the use of standards-based grading, students will be scored on their ability to master individual standards in every class. Students will have immediate access to their performance through a student tracking system posted in every classroom as well as through individual student portfolios. Students, teachers, parents, and the administrators will use the data from the student trackers to determine specific areas of improvement. Teachers will then determine opportunities for re-teach and students will determine next steps. Through standards-based grading, students will have multiple opportunities to show proficiency in each standard through reassessments.

**Affirmations and Assurances (LAUSD-Specific Language)**
Math and Science College Prep shall:
- Be non-sectarian in its programs, admission policies, employment practices and all other operations.
- Not charge tuition.
- Not discriminate against any student on the basis of disability, gender, a nationality, race or ethnicity, religion, sexual orientation, or any other characteristic that is contained in the definition of hate crimes set forth in Section 422.55 of the Penal Code.
- Admit all pupils who wish to attend the school. EC 47605 (d) (2) (A)
- Determine admission by a public random drawing, if the number of pupils who wish to attend the school exceeds the school capacity, and preference shall be extended to pupils who currently attend the Charter School and pupils who reside in the District. EC 47605 (d) (2) (B)
- Not enroll pupils over nineteen (19) years of age unless continuously enrolled in public school and making satisfactory progress toward high school diploma requirements.
- Not require any child to attend the charter school nor any employee to work at the charter school.
- In accordance with education Code Section 48200, if a pupil is expelled or leaves the charter school without graduation or completing the school year for any reason, the charter school shall notify the superintendent of the school district of the pupil’s last known address within 30 days, and shall, upon request, provide that school district with a copy of the cumulative record of the pupil, including a transcript of grades or report card, and health information.
Element 1: The Educational Program

Governing Law: "A description of the educational program of the school, designed among other things, to identify those whom the school is attempting to educate, what it means to be an "educated person in the 21st century" and how learning best occurs. The goals identified in that program shall include the objective of enabling pupils to become self-motivated, competent, and lifelong learners." Ed. Code 47605(b)(5)(A)

Overview (LAUSD Required Language)
- The address of the Charter School is to be determined, but in the Koreatown area of L.A.
- The temporary phone number of the Charter School is (310) 963-7373.
- The contact person for the Charter School is Emilio Pack.
- The number of rooms at the Charter School is 7.
- The grade configuration is 9-12th grades, with an incoming class of 9th graders only.
- The number of students in the first year will be: 145 students.
- The grade levels we serve are 9-12th grades.
- The opening date of the charter School is August 13, 2012.
- The admission requirements include: Please see Element 8 for more details.
- The operational capacity is: 145 in year one and 500 students in year.
- The instructional calendar will be: School begins on 8/13/12 and ends on 6/27/13 (please see attached calendar in Element 1).
- The bell schedule for the Charter School will be: School starts at 7:45 am and end at 3:30 pm every day except Wednesdays. On Wednesday, school starts at 7:45 am and ends at 1:30 with professional development from 1:30 pm to 3:30 pm. (please see Bell Schedule in Element 1).
- If space is available, traveling students will have the option to attend.

A. Student Demographics

Grade Levels and Geographic Focus
Math and Science College Prep ("MSCP") intends to serve students in the 9th through 12th grades, primarily located in the Koreatown area of Los Angeles County. The school will serve similar demographics to those of Los Angeles Senior High School, Belmont SH, and West Adams Prep. MSCP plans to open with 145 students in the 9th grade in 2012, and grow by one grade per year, until it reaches full growth with approximately 500 students in 2017.

Demographic Data
The demographics of Los Angeles Senior High School, Belmont SH, and West Adams Prep and other local LAUSD and charter schools are listed in the charts on the following pages. We anticipate a student population that is representative of these student populations. All LAUSD and Charter Schools in the area have a State rank of 1-2 except one.
<table>
<thead>
<tr>
<th>LAUSD SCHOOL</th>
<th># of Students</th>
<th>Multi Track?</th>
<th>PI?</th>
<th>Met Schoolwide Growth Target?</th>
<th>Met all Subgroup Growth Targets?</th>
<th>API</th>
<th>API State Rank</th>
<th>Similar School Rank</th>
<th>% F/R Lunch</th>
<th>% of Special Ed. Stu.</th>
<th>% of ELL Students</th>
<th>% Major Ethnicity #1</th>
<th>% Major Ethnicity #2</th>
<th>% Major Ethnicity #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles SH</td>
<td>2980</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>637</td>
<td>1</td>
<td>4</td>
<td>67%</td>
<td>13%</td>
<td>34%</td>
<td>79% Latino</td>
<td>11% Black</td>
<td>6% Asian</td>
</tr>
<tr>
<td>Belmont SH</td>
<td>1370</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>645</td>
<td>2</td>
<td>5</td>
<td>88%</td>
<td>12%</td>
<td>41%</td>
<td>89% Latino</td>
<td>5% Asian</td>
<td>3% Filipino</td>
</tr>
<tr>
<td>West Adams Prep SH</td>
<td>2635</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>634</td>
<td>1</td>
<td>2</td>
<td>94%</td>
<td>12%</td>
<td>37%</td>
<td>88% Latino</td>
<td>10% Asian</td>
<td>1% Black</td>
</tr>
<tr>
<td>Ambassador School of Global Leadership</td>
<td>484</td>
<td>No</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
<td>596</td>
<td>No Data</td>
<td>No Data</td>
<td>81%</td>
<td>13%</td>
<td>27%</td>
<td>79% Latino</td>
<td>10% Asian</td>
<td>4% Black</td>
</tr>
<tr>
<td>Los Angeles High School of the Arts</td>
<td>389</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>661</td>
<td>2</td>
<td>7</td>
<td>93%</td>
<td>10%</td>
<td>38%</td>
<td>92% Latino</td>
<td>3% Black</td>
<td>2% Filipino</td>
</tr>
<tr>
<td>New Open World High School</td>
<td>465</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>662</td>
<td>1</td>
<td>2</td>
<td>90%</td>
<td>11%</td>
<td>47%</td>
<td>85% Latino</td>
<td>9% Asian</td>
<td>2% Black</td>
</tr>
<tr>
<td>UCLA Community School</td>
<td>330</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>661</td>
<td>2</td>
<td>3</td>
<td>84%</td>
<td>8%</td>
<td>46%</td>
<td>76% Latino</td>
<td>15% Asian</td>
<td>3% Black, 3% Filipino</td>
</tr>
</tbody>
</table>
## LAUSD SCHOOL

<table>
<thead>
<tr>
<th>School for the Visual Arts and Humanities</th>
<th># of Students</th>
<th>Multi Track?</th>
<th>PI?</th>
<th>Met Schoolwide Growth Target?</th>
<th>Met all Subgroup Growth Targets?</th>
<th>API</th>
<th>API State Rank</th>
<th>Similar School Rank</th>
<th>% F/R Lunch</th>
<th>% of Special Ed. Stu.</th>
<th>% of ELL Students</th>
<th>% Major Ethnicity #1</th>
<th>% Major Ethnicity #2</th>
<th>% Major Ethnicity #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>401</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>647</td>
<td>2</td>
<td>2</td>
<td>84%</td>
<td>8%</td>
<td>36%</td>
<td>87% Latino</td>
<td>5% Filipino</td>
<td>4% Asian</td>
</tr>
</tbody>
</table>

| Berendo MS                               | 1899          | No           | Yes | Yes                         | Yes                             | 700 | 1              | 6                    | 86%         | 12%                    | 35%                | 95% Latino            | 5% Asian              | 2% Black              |

| Virgil MS                                | 1716          | No           | Yes | NA                          | NA                              | 663 | 1*             | 5*                   | 99%         | 11%                    | 37%                | 86% Latino            | 9% Filipino           | 1% Black              |

* 2010 Data. Some 2011 data is not available.

## CHARTER SCHOOLS

<table>
<thead>
<tr>
<th>Los Angeles Academy of Arts and Enterprise</th>
<th># of Students</th>
<th>Multi Track?</th>
<th>PI?</th>
<th>Met Schoolwide Growth Target?</th>
<th>Met all Subgroup Growth Targets?</th>
<th>API</th>
<th>API State Rank</th>
<th>Similar School Rank</th>
<th>% F/R Lunch</th>
<th>% of Special Ed. Stu.</th>
<th>% of ELL Students</th>
<th>% Major Ethnicity #1</th>
<th>% Major Ethnicity #2</th>
<th>% Major Ethnicity #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>377</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>620</td>
<td>1</td>
<td>1</td>
<td>99%</td>
<td>8%</td>
<td>51%</td>
<td>96% Latino</td>
<td>2% Black</td>
<td>1% Filipino</td>
</tr>
</tbody>
</table>

| Camino Nuevo HS                           | 429           | No           | No  | No                          | No                              | 783 | 8              | 10                   | 91%         | 7%                     | 14%                | 95% Latino            | 2% Asian              | 1% Black, 1% White, 1% Filipino |

| Central City Value School                 | 639           | No           | Yes | Yes                         | Yes                             | 737 | 2              | 7                    | 97%         | 6%                     | 36%                | 100% Latino           | NA                   | NA                   |

## Koreatown School’s Demographics Analysis
B. Mission and Goals

Mission
The mission of the Math and Science College Prep is to operate a small, high performance school that will prepare all students to succeed and graduate from college.

Vision
The vision of the Math and Science College Prep is to create a highly accountable model of innovation with highly qualified teachers guided by core principles that are based on what research has shown to be best educational practices and to serve as a research and development model for the District and other public schools.

What It Means To Be an Educated Person in the 21st Century
Gleaning insight from the research performed by Partnership for 21st Century Skills, MSCP recognizes that an educated person in the 21st century is someone who has demonstrated:

- Competency in all core academic content areas;
- Media and information literacy (i.e., the ability to navigate the latest technology to obtain, synthesize and analyze a variety of information);
- Excellent communication and higher order, critical thinking skills;
- Initiative and self-direction in guiding his or her own life-long learning;
- A commitment to integrity, social responsibility and an understanding of the context of the world in which he or she lives; and
- Strong leadership skills and team-building capacity.

How Learning Occurs Best

C. School Day and Calendar

A Typical Day
When a visitor enters MSCP, they see a clean, well-kept space with examples of student work and college information posted throughout the hallways. Every classroom has a college’s name posted above the door to represent where that classroom’s teacher attended college.

Once in the classrooms, including core classes such as English, math science, and history, the visitor notices that the students are active in their learning and assessments because the grading is designed to give the students responsibility in tracking their strengths and areas of need. Students engage in discussion with the teacher and their peers around the lesson objectives. Because students are always aware of their individual performance on specific standards and learning targets, they seek opportunities to show mastery in their subject and work collaboratively with their peers and teacher to attain that mastery. Overall, there is a high caliber of teaching and a high level of student engagement and adherence to the core standards including the subjects of English, math, science and history.

The visitor also sees a variety of teaching and learning occurring in all classrooms, including English, math, science, and history, during the 120 minute block period. This includes mini-lessons, cooperative learning, inquiry-based learning, stations, and many other effective teaching and learning strategies. All pedagogy results in students using critical-thinking skills to apply the day’s lesson objective. The visitor also sees the teacher using constant formative assessment, data collection, and checking for understanding to drive the instruction. School administrators and/or mentor teachers are also observed as they make visits into the classroom to help coach teachers and collaborate with them on designing assessments and lesson plans.

It becomes evident to any visitor that MSCP is a highly personalized and supportive learning environment, where teachers, administrators, and students know each other well and demonstrate respect for one another. A visitor is struck by the small class sizes, with an even smaller number of students per advisory period group.

When the visitor enters the weekly professional development sessions, he or she notices caring discussions about best practices and challenges. There is a sense of true collaboration among faculty. The visitor also notices that teachers are analyzing data and are utilizing the school’s sophisticated, user-friendly data management system as a tool to inform their lesson planning and guide their discussions.
with colleagues. The school’s administration and/or mentor teachers are facilitating the staff in activities that will help them grow as instructors and educators.

After the bell rings at the end of the day, the visitor discovers that the students’ school experience for the day is not necessarily over. The visitor is told by the students that one of their favorite parts of the MSCP model is that they have ample after-school support through tutoring and extended day programs, such as service clubs and athletics.

Overall, a visitor experiences a different kind of learning environment at MSCP: one where curiosity is sparked, where all students are respected and known well by the adults, and where teachers are true professionals.

A visitor leaves MSCP knowing firsthand that the students will graduate prepared to succeed in college and the 21st century workplace.

Daily Schedule

<table>
<thead>
<tr>
<th>Mondays and Thursdays (Odd # Periods)</th>
<th>Instructional Periods</th>
<th>Minutes Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period 1 (120 minutes per class)</td>
<td>7:45 a.m. – 8:25 a.m.</td>
<td>40 +5</td>
</tr>
<tr>
<td>Period 2 (40 minute advisory)</td>
<td>8:30 a.m. – 10:30 a.m.</td>
<td>120</td>
</tr>
<tr>
<td>Period 3 (Nutrition)</td>
<td>10:30 a.m. – 10:50 a.m.</td>
<td>20 +5</td>
</tr>
<tr>
<td>Period 4 (Lunch)</td>
<td>12:55 p.m. – 1:25 p.m.</td>
<td>30 +5</td>
</tr>
<tr>
<td>Period 5</td>
<td>1:30 p.m. – 3:30 p.m.</td>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wednesdays Shortened Day Professional Development</th>
<th>Instructional Periods</th>
<th>Minutes Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period 1 (50 minutes per class)</td>
<td>7:45 a.m. – 8:35 a.m.</td>
<td>50 +3</td>
</tr>
<tr>
<td>Period 2</td>
<td>8:38 a.m. – 9:28 a.m.</td>
<td>50 +3</td>
</tr>
<tr>
<td>Period 3</td>
<td>9:31 a.m. – 10:21 a.m.</td>
<td>50 +3</td>
</tr>
<tr>
<td>Period 4</td>
<td>10:24 a.m. – 11:14 a.m.</td>
<td>50</td>
</tr>
<tr>
<td>Lunch</td>
<td>11:14 a.m. – 11:44 p.m.</td>
<td>30 +3</td>
</tr>
<tr>
<td>Period 5</td>
<td>11:47 p.m. – 12:37 p.m.</td>
<td>50 +3</td>
</tr>
<tr>
<td>Period 6</td>
<td>12:40 p.m. – 1:30 p.m.</td>
<td>50</td>
</tr>
<tr>
<td>Prof. Development</td>
<td>1:30 p.m. – 3:30 p.m.</td>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tuesdays and Fridays (Even # Periods)</th>
<th>Instructional Periods</th>
<th>Minutes Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period 1 (120 minutes per class)</td>
<td>7:45 a.m. – 8:25 a.m.</td>
<td>40 +5</td>
</tr>
<tr>
<td>Period 2 (40 minute advisory)</td>
<td>8:30 a.m. – 10:30 a.m.</td>
<td>120</td>
</tr>
<tr>
<td>Period 3 (Nutrition)</td>
<td>10:30 a.m. – 10:50 a.m.</td>
<td>20 +5</td>
</tr>
<tr>
<td>Period 4 (Lunch)</td>
<td>12:55 p.m. – 1:25 p.m.</td>
<td>30 +5</td>
</tr>
<tr>
<td>Period 6</td>
<td>1:30 p.m. – 3:30 p.m.</td>
<td>120</td>
</tr>
</tbody>
</table>
School Academic Calendar
MSCP will operate on a 190-day, single-track schedule.

Calendar Highlights

<table>
<thead>
<tr>
<th>Beginning Date</th>
<th>Ending Date</th>
<th>Holidays and Breaks</th>
<th>Professional Dev. Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction Begins</td>
<td>Instruction Ends</td>
<td>Labor Day</td>
<td>9/3/12</td>
</tr>
<tr>
<td>August 13, 2012</td>
<td>June 27, 2012</td>
<td>Veterans’ Day</td>
<td>11/12/12 (observed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thanksgiving</td>
<td>12/22/12 – 11/23/12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Winter Break</td>
<td>12/17/12 – 1/4/13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Martin L. King Day</td>
<td>1/21/13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presidents Day</td>
<td>2/18/13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spring Break</td>
<td>4/1/12 – 4/5/13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Memorial Day</td>
<td>5/27/13</td>
</tr>
<tr>
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<tr>
<td></td>
<td></td>
<td>Labor Day</td>
<td>11/12/12 (observed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Veterans’ Day</td>
<td>12/22/12 – 11/23/12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thanksgiving</td>
<td>12/17/12 – 1/4/13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Martin L. King Day</td>
<td>1/21/13</td>
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<tr>
<td></td>
<td></td>
<td>Presidents Day</td>
<td>2/18/13</td>
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<tr>
<td></td>
<td></td>
<td>Spring Break</td>
<td>4/1/12 – 4/5/13</td>
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<td></td>
<td></td>
<td>Memorial Day</td>
<td>5/27/13</td>
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<tr>
<td></td>
<td></td>
<td>Labor Day</td>
<td>9/3/12</td>
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<tr>
<td></td>
<td></td>
<td>Veterans’ Day</td>
<td>11/12/12 (observed)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thanksgiving</td>
<td>11/22/12 – 11/23/12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Winter Break</td>
<td>12/17/12 – 1/4/13</td>
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<td></td>
<td></td>
<td>Martin L. King Day</td>
<td>1/21/13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presidents Day</td>
<td>2/18/13</td>
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<td></td>
<td></td>
<td>Spring Break</td>
<td>4/1/12 – 4/5/13</td>
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<td></td>
<td></td>
<td>Memorial Day</td>
<td>5/27/13</td>
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<tr>
<td></td>
<td></td>
<td>Labor Day</td>
<td>8/6/12 – 8/10/11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Veterans’ Day</td>
<td>(Summer Institute)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thanksgiving</td>
<td>10/15/12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Winter Break</td>
<td>1/7/13</td>
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<tr>
<td></td>
<td></td>
<td>Martin L. King Day</td>
<td>4/8/13</td>
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<tr>
<td></td>
<td></td>
<td>Presidents Day</td>
<td>(Pupil Free Days)</td>
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<tr>
<td></td>
<td></td>
<td>Spring Break</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Memorial Day</td>
<td></td>
</tr>
</tbody>
</table>

(Academic Calendar located in Attachment 10)

Assurance of Compliance with Ed Code 47612.5
Shall, for each fiscal year, offer at a minimum, the number of minutes of instruction per grade level as required by the Education Code Section 47612.5(a)(1)(A)-(D).
D. Instructional Design

The instructional program of MSCP has been designed to create an environment where the previously described vision for 21st century students and how learning occurs best will be realized.

<table>
<thead>
<tr>
<th>Students Learn Best When...</th>
<th>Research Supporting MSCP Strategies to Create These Conditions</th>
</tr>
</thead>
</table>
| Instruction is personalized to meet the students’ needs. | Individual Learning Plans (ILPs):  
  - “Research continues to show that the time to offer remedial instruction is early rather than later. In order to remediate students, educators need …Individualized Learning Plans to meet the needs of each student in the class.”\(^1\)  

Advisory  
- According to the Coalition of Essential Schools, “published research on advisory … indicates that the program leads to the kind of positive outcomes—such as increased attendance—that correlate with improved academic outcomes.”\(^2\)  

Small Class Sizes  
- MSCP’s average class size will be 24.1, which does not include P.E. and electives.  
  - “Tennessee’s longitudinal class-size study — Student Teacher Achievement Ratio (STAR) project — results showed that those enrolled in small classes as youngsters were more likely to:  
    1. *Graduate on time* — 72 percent of students, versus 66 percent from regular classes and 65 percent from classes with a paraprofessional  
    2. *Complete more advanced math and English courses*  
    3. *Complete high school* — 19 percent dropped out, versus 23 percent from regular classes and 26 percent from classes with a paraprofessional  
    4. *Graduate with honors*\(^3\).  

Reduced Student Load  
- UCLA Professor William Ouchi has concluded from his research of New York and Boston Public Schools that reduced student load is “more important than any other [metric] in determining school success.”\(^4\)  
  - Student load will be reduced by approximately 50 students.  

| Lessons are relevant to the students’ lives and have real-world application. | Partnerships with Industry Professionals:  
- Research shows that creating multiple pathways to graduation, through a variety of learning opportunities, provides students with a meaningful high school structure that links subject areas and encompasses both personal experiences and connections to the world of adult work.”\(^5\)  

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4. http://www.anderson.ucla.edu/x16254.xml  
<table>
<thead>
<tr>
<th>Students Learn Best When…</th>
<th>Research Supporting MSCP Strategies to Create These Conditions</th>
</tr>
</thead>
</table>
| Students have early college exposure and high expectations. | **High Expectations**  
- “During the last decade, research on successful programs for youth at risk of academic failure has clearly demonstrated that high expectations— with concomitant support—is a critical factor in decreasing the number of students who drop out of school and in increasing the number of youth who go on to college.” <sup>6</sup>  
**Dual Enrollment**  
- *The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States* study revealed that students who take college courses while in high school are more likely than their peers to graduate, to go on to college, and to do well in college. <sup>7</sup> |
| Teachers continuously improve their craft by participating in a robust professional development program and peer collaboration. | **Teacher Leaders/Master Teachers** (Ability to serve role determined based on interview performance and NCLB compliance)  
- A study of 900 school districts found that spending additional resources on more highly qualified teachers (experience and past performance) led to greater increases in student achievement than any other use of those resources (Ferguson, 1991).  
**Built-In Time in the Schedule for Collaboration and PD**  
- Linda Darling Hammond and Gary Sykes of Stanford University found “teacher conversations and collaborations” are “key to increasing student achievement”. <sup>8</sup>  
**Professional Learning Community**  
- According to years of fieldwork in diverse secondary schools, McLaughlin found that “meaningful professional development does not take place during professional development workshops or in-service presentations, but in the context of professional communities that have been locally developed to be responsive to teachers’ needs.” <sup>9</sup> |
| The school attracts and retains teachers who are passionate, competent and engaging through innovative recruitment strategies and a challenging career ladder. | **Paying More for Teacher Leaders/Master Teachers**  
- A study of 900 school districts found that spending additional resources on more highly qualified teachers led to greater increases in student achievement than any other use of those resources (Ferguson, 1991).  
- $5,000 stipends will be provided for Master Teachers.  
**Career Ladder for Teachers**  
- Research supports the notion that “career ladder incentives should motivate teachers to improve classroom performance.” <sup>10</sup>  
- Teachers will be encouraged to move into master teacher or administrative roles when appropriate. |

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<sup>6</sup> [http://www.ncrel.org/sdrs/areas/issues/students/atrisk/at6lk11.htm](http://www.ncrel.org/sdrs/areas/issues/students/atrisk/at6lk11.htm)


<sup>8</sup> Linda Darling Hammond and Gary Sykes of Stanford University

<sup>9</sup> Steiner, Lucy. *What the Research Says About Professional Development That Works*,

<sup>10</sup> [http://www.springerlink.com/content/q157250803276175/](http://www.springerlink.com/content/q157250803276175/)
### Students Learn Best When…

<table>
<thead>
<tr>
<th>Students Learn Best When…</th>
<th>Research Supporting MSCP Strategies to Create These Conditions</th>
</tr>
</thead>
</table>
| There is a high level of engagement by parents/guardians in their children’s learning process. | Parent Center and Volunteer Opportunities  
  • “Research overwhelmingly demonstrates that parent involvement in children’s learning is positively related to achievement.” ⁱ¹ |

| Instruction is driven by data. | Sophisticated Data Management System  
  Robust Professional Development  
  • An EdSource 2007 research report confirmed what many policymakers have been saying for a long time – that data-driven instruction will increase student performance. ⁰² |

### Instructional Approach and Methodologies

The chart above describes overall instructional strategies and approaches that will be implemented at the school.

Additionally, teachers will employ a variety of instructional practices in the classroom, including the following:

- **Teacher-as-Facilitator**
  In a learning environment that seeks to support students in becoming self-directed, life-long learners, the primary role of the teacher is to guide learning rather than direct it ¹³. At MSCP, the teacher acts as a coach, providing frameworks for learning and helps students build on their strengths and interests.

- **Cooperative Learning**
  Cooperative learning supports the MSCP vision in a number of ways. In guiding effective small-group learning, MSCP teaches students the communication and team-building skills that are essential to life in the 21ˢᵗ century (please see section “What It Means to be an Educated Person in the 21ˢᵗ Century”). As students work together to solve problems and determine work processes, they begin to direct their own learning.

- **Scaffolding**
  Scaffolding instruction is based on Vygotsky’s socio-cultural theory of learning and the zone of proximal development, and relates to the Teacher-as-Facilitator role ¹⁴. Teachers identify the current developmental skills of individual students and of classes and provide support structures to help students move to the next level. As the year goes on, the student becomes more adept at skills and at directing his or her learning, and the teacher begins to remove the supports.

- **Lecture/Modeling**
  Direct instruction, specifically lecture and modeling with question and answer opportunities for checking off understanding, is a methodology that will be used when teachers need to explain or demonstrate specific content and skills. This methodology serves an important role when combined with other instructional strategies, as it helps introduce or reinforce concepts quickly, and efficiently. It is also helpful for students who are primarily auditory learners.

### No Child Left Behind

⁰² [http://www.edsource.org/pub_abs_el07.cfm](http://www.edsource.org/pub_abs_el07.cfm)
¹³ [http://tip.psychology.org/vygotsky.html](http://tip.psychology.org/vygotsky.html)
¹⁴ [Ibid.](#)
As required by NCLB, MSCP will work with its staff to insure that all students have full access to the curriculum and that each subgroup in the school is making meaningful progress towards meeting all of the standards. MSCP will implement all provisions of NCLB that are applicable to charter schools, including use of effective methods and instructional strategies that are based on scientific research that strengthens the core academic program, meeting AYP goals, a school accountability report, providing extended learning for students below grade level, ensuring teacher quality, and participating in all required assessments.

CALIFORNIA CONTENT STANDARDS

The core curriculum for Math and Science College Prep students will be based on the specific standards in core content areas aligned with A-G college-prep coursework that guide our expectations for what students will know and be able to do in each curricular area. The school will adopt “Common Core Standards” once they are developed and will be aligned to A-G coursework.

<table>
<thead>
<tr>
<th>Reading: Word Analysis</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9th &amp; 10th</td>
<td></td>
</tr>
<tr>
<td>11th &amp; 12th</td>
<td></td>
</tr>
<tr>
<td><strong>Vocabulary and Concept Development</strong></td>
<td><strong>Vocabulary and Concept Development</strong></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>1.1 Identify and use the literal and figurative meanings of words and understand word derivations.</td>
<td>1.1 Trace the etymology of significant terms used in political science and history.</td>
</tr>
<tr>
<td>1.2 Distinguish between the denotative and connotative meanings of words and interpret the connotative power of words.</td>
<td>1.2 Apply knowledge of Greek, Latin, and Anglo-Saxon roots and affixes to draw inferences concerning the meaning of scientific and mathematical terminology.</td>
</tr>
<tr>
<td>1.3 Identify Greek, Roman, and Norse mythology and use the knowledge to understand the origin and meaning of new words.</td>
<td>1.3 Discern the meaning of analogies encountered, analyzing specific comparisons as well as relationships and inferences.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Reading: Comprehension</strong></th>
<th><strong>Reading: Comprehension</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9th-10th</strong></td>
<td><strong>11th-12th</strong></td>
</tr>
<tr>
<td><strong>Structural Features of Informational Materials</strong></td>
<td><strong>Structural Features of Informational Materials</strong></td>
</tr>
<tr>
<td>2.1 Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.</td>
<td>2.1 Analyze both the features and the rhetorical devices of different types of public documents (e.g., policy statements, speeches, debates, platforms) and the way in which authors use those features and devices.</td>
</tr>
<tr>
<td>2.2 Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Comprehension and Analysis of Grade-Level-Appropriate Text</strong></th>
<th><strong>Comprehension and Analysis of Grade-Level-Appropriate Text</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3 Generate relevant questions about readings on issues that can be researched.</td>
<td>2.2 Analyze the way in which clarity of meaning is affected by the patterns of organization hierarchical structures, repetition of the main ideas, syntax, and word choice in the text.</td>
</tr>
<tr>
<td>2.4 Synthesize the content from several sources or works by a single author dealing with a single issue; paraphrase the ideas and connect them to other sources and related topics to demonstrate comprehension.</td>
<td>2.3 Verify and clarify facts presented in other types of expository texts by using a variety of consumer, workplace, and public documents.</td>
</tr>
<tr>
<td>2.5 Extend ideas presented in primary or secondary sources through original analysis, evaluation, and elaboration.</td>
<td>2.4. Make warranted and reasonable assertions about the author’s arguments by using elements of the text to defend and clarify interpretations.</td>
</tr>
<tr>
<td>2.6 Demonstrate use of sophisticated learning tools by following technical directions.</td>
<td>2.5 Analyze an author’s implicit and explicit philosophical assumptions and beliefs about a subject.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Expository Critique</strong></th>
<th><strong>Expository Critique</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7 Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.</td>
<td>2.6 Critique the power, validity, and truthfulness of arguments set forth in public documents; their appeal to both friendly and hostile audiences; and the extent to which the arguments anticipate and address reader concerns and counterclaims of consumer, workplace, and public documents.</td>
</tr>
<tr>
<td>2.8 Evaluate the credibility of an author’s argument or defense of a claim by critiquing the relationship between generalizations and evidence.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Reading: Literary Analysis and Response</strong></th>
<th><strong>Reading: Literary Analysis and Response</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9th &amp; 10th</strong></td>
<td><strong>11th &amp; 12th</strong></td>
</tr>
<tr>
<td><strong>Structural Features of Literature</strong></td>
<td><strong>Structural Features of Literature</strong></td>
</tr>
<tr>
<td>3.1 Articulate the relationship between the expressed purposes and the characteristics of different forms of dramatic literature (e.g., comedy, tragedy, drama, dramatic monologue).</td>
<td>3.1 Analyze characteristics of subgenres (e.g., satire, parody, allegory, pastoral) that are used in poetry, prose, plays, novels, short stories, essays, and other basic genres.</td>
</tr>
<tr>
<td>3.2 Compare and contrast the presentation of a similar theme or topic across genres to explain how the selection of genre shapes the theme or topic.</td>
<td><strong>Narrative Analysis of Grade-Level-Appropriate Text</strong></td>
</tr>
<tr>
<td>3.2 Analyze the way in which the theme or meaning of a selection represents a view or comment on life,</td>
<td></td>
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</tbody>
</table>


Narrative Analysis of Grade-Level-Appropriate Text

3.3 Analyze interactions between main and subordinate characters in a literary text (e.g., internal and external conflicts, motivations, relationships, influences) and explain the way those interactions affect the plot.

3.4 Determine characters’ traits by what the characters say about themselves in narration, dialogue, dramatic monologue, and soliloquy.

3.5 Compare works that express a universal theme and provide evidence to support the ideas expressed in each work.

3.6 Analyze and trace an author’s development of time and sequence, including the use of complex literary devices (e.g., foreshadowing, flashbacks)

3.7 Recognize and understand the significance of various literary devices, including figurative language, imagery, allegory, and symbolism, and explain their appeal.

3.9 Explain how voice, persona, and the choice of a narrator affect characterization and the tone, plot, and credibility of a text.

3.10 Identify and describe the function of dialogue, scene designs, soliloquies, asides, and character foils in dramatic literature

Literary Criticism

3.11 Evaluate the aesthetic qualities of style, including the impact of diction and figurative language on tone, mood, and theme, using the terminology of literary criticism (Aesthetic approach).

3.12 Analyze the way in which a work of literature is related to the themes and issues of its historical period (Historical approach).

3.3 Analyze the ways in which irony, tone, mood, the author’s style, and the “sound” of language achieve specific rhetorical or aesthetic purposes or both.

3.4 Analyze ways in which poets use imagery, personification, figures of speech, and sounds to evoke readers’ emotions.

3.5 Analyze recognized works of American literature representing a variety of genres and traditions:

a. Trace the development of American literature from the colonial period forward.

b. Contrast the major periods, themes, styles, and trends and describe how works by members of different cultures relate to one another in each period.

c. Evaluate the philosophical, political, religious, ethical, and social influences of the historical period that shaped the characters, plots, and settings.

3.6 Analyze the way in which authors through the centuries have used archetypes drawn from myth and tradition in literature, film, political speeches, and religious writings (e.g., how the archetypes of banishment from an ideal world may be used to interpret Shakespeare’s tragedy Macbeth).

3.7 Analyze recognized works of world literature from a variety of authors:

a. Contrast the major literary forms, techniques, and characteristics of the major literary periods (e.g., Homeric Greece, medieval, romantic, neoclassic, modern).

b. Relate literary works and authors to the major themes and issues of their eras. Evaluate the philosophical, political, religious, ethical, and social influences of the historical period that shaped the characters, plots, and, settings.

Literary Criticism

3.8 Analyze the clarity and consistency of political assumptions in a selection of literary works or essays on a topic (e.g., suffrage, women’s role in organized labor) (Political approach).

3.9 Analyze the philosophical arguments presented in literary works.

Writing: Writing Strategies

Organization and Focus

1.1 Establish a controlling impression or coherent thesis that conveys a clear and distinctive perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.

1.2 Use precise language, action verbs, sensory details, appropriate modifiers, and the active rather than the passive voice.

Research and Technology

1.1 Demonstrate an understanding of the elements of discourse (e.g., purpose, speaker, audience, form) when completing narrative, expository, persuasive, or descriptive writing assignments.

1.2 Use point of view, characterization, style (e.g., use of irony), and related elements for specific rhetorical and aesthetic purposes.

1.3 Structure ideas and arguments in a sustained,
**Writing: Writing Strategies**

<table>
<thead>
<tr>
<th>9th-10th</th>
<th>11th-12th</th>
</tr>
</thead>
</table>
| **2.1 Write biographical or autobiographical narratives or short stories**  
  a. Relate a sequence of events and communicate the significance of the events to the audience.  
  b. Locate scenes and incidents in specific places.  
  c. Describe with concrete sensory details the sights, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of the characters; use interior monologue to depict the characters’ feelings.  
  d. Pace the presentation of actions to accommodate changes in time and mood.  
  e. Make effective use of descriptions of appearance, images, shifting perspectives, and sensory details. | **2.1 Write fictional, autobiographical, or biographical narratives:**  
 a. Narrate a sequence of events and communicate their significance to the audience.  
 b. Locate scenes and incidents in specific places.  
 c. Describe with concrete sensory details the sights, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of the characters; use interior monologue to depict the characters’ feelings.  
 d. Pace the presentation of actions to accommodate temporal, spatial, and dramatic mood changes.  
 e. Make effective use of descriptions of appearance, images, shifting perspectives; and sensory details.  

**2.2 Write responses to literature:**  
 a. Demonstrate a comprehensive grasp of the significant ideas of literary works.  
 b. Support important ideas and viewpoints through accurate and detailed references to the text or to other works.  
 c. Demonstrate awareness of the author’s use of stylistic devices and an appreciation of the effects created.  
 d. Identify and assess the impact of perceived persuasive, and sophisticated way and support them with precise and relevant examples. |
| **Research and Technology**  
 1. Develop presentations by using clear research questions and creative and critical research strategies (e.g., field studies, oral histories, interviews, experiments, electronic sources).  
 1.7 Use systematic strategies to organize and record information (e.g., anecdotal scripting, annotated bibliographies).  
 1.8 Integrate databases, graphics, and spreadsheets into word-processed documents.  

**Evaluation and Revision**  
 1. Revise writing to improve the logic and coherence of the organization and controlling perspective, the precision of word choice, and the tone by taking into consideration the audience, purpose, and formality of the context.
### Written and Oral Language Conventions

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<tr>
<th>9th-10th</th>
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<tr>
<td><strong>Ambiguities, Nuances, and Complexities within the Text</strong></td>
<td><strong>Effects Created.</strong></td>
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<tr>
<td><strong>2.3 Write Expository Compositions, including Analytical Essays and Research Reports:</strong></td>
<td><strong>3. Write Reflective Compositions:</strong></td>
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<tr>
<td>a. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.</td>
<td>a. Explore the significance of personal experiences, events, conditions, or concerns by using rhetorical strategies (e.g., narration, description, exposition, persuasion).</td>
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<td>b. Convey information and ideas from primary and secondary sources accurately and coherently.</td>
<td>b. Draw comparisons between specific incidents and broader themes that illustrate the writer’s important beliefs or generalizations about life.</td>
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<td>c. Make distinctions between the relative value and significance of specific data, facts, and ideas.</td>
<td>c. Maintain a balance in describing individual incidents and relate those incidents to more general and abstract ideas.</td>
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<td>d. Include visual aids by employing appropriate technology to organize and record information on charts, maps, graphs.</td>
<td><strong>2.4 Write Historical Investigation Reports:</strong></td>
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<td>e. Anticipate and address readers’ potential misunderstandings, biases, and expectations.</td>
<td>a. Use exposition, narration, description, argumentation, exposition, or some combination of rhetorical strategies to support the main proposition.</td>
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<td>f. Use technical terms and notations accurately.</td>
<td>b. Analyze several historical records of a single event, examining critical relationships between elements of the research topic.</td>
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<td><strong>2.4 Write Persuasive Compositions:</strong></td>
<td>c. Explain the perceived reason or reasons for the similarities and differences in historical records with information derived from primary and secondary sources to support or enhance the presentation.</td>
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<td>a. Structure ideas and arguments in a sustained and logical fashion.</td>
<td><strong>2.5 Write Business Letters:</strong></td>
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<td>b. Use specific rhetorical devices to support assertions (e.g., appeal to logic through reasoning; appeal to emotion or ethical belief; relate a personal anecdote, case study, or analogy).</td>
<td>a. Provide clear and purposeful information and address the intended audience appropriately.</td>
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<tr>
<td>c. Clarify and defend positions with precise and relevant evidence, including facts, expert opinions, quotations, and expressions of commonly accepted beliefs and logical reasoning.</td>
<td>b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.</td>
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<tr>
<td>d. Address readers’ concerns, counterclaims, biases, and expectations.</td>
<td>c. Highlight central ideas or images.</td>
</tr>
<tr>
<td><strong>2.5 Write Business Letters:</strong></td>
<td>d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents’ readability and impact.</td>
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<tr>
<td>a. Provide clear and purposeful information and address the intended audience appropriately.</td>
<td><strong>2.6 Write Technical Documents (e.g., a Manual on Rules of Behavior for Conflict Resolution, Procedures for Conducting a Meeting, Minutes of a Meeting):</strong></td>
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<tr>
<td>b. Use appropriate vocabulary, tone, and style to take into account the nature of the relationship with, and the knowledge and interests of, the recipients.</td>
<td>a. Report information and convey ideas logically and correctly.</td>
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<td>c. Highlight central ideas or images.</td>
<td>b. Offer detailed and accurate specifications.</td>
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<tr>
<td>d. Follow a conventional style with page formats, fonts, and spacing that contribute to the documents’ readability and impact.</td>
<td>c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).</td>
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<tr>
<td><strong>2.6 Write Technical Documents (e.g., a Manual on Rules of Behavior for Conflict Resolution, Procedures for Conducting a Meeting, Minutes of a Meeting):</strong></td>
<td>d. Anticipate readers’ problems, mistakes, and misunderstandings.</td>
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| **1.1 Identify and correctly use clauses (e.g., main and subordinate), phrases (e.g., gerund, infinitive, and participial), and mechanics of punctuation (e.g., semicolons, colons, ellipses, hyphens).** | **11th & 12th**
| **1.2 Understand sentence construction (e.g., parallel structure, subordination, proper placement of modifiers) and proper English usage (e.g., consistency of verb tenses).** | **1.2 Produce legible work that shows accurate spelling and correct punctuation and capitalization.**
| **1.3 Demonstrate an understanding of proper English usage and control of grammar, paragraph and sentence structure, diction, and syntax.** | **1.3 Reflect appropriate manuscript requirements in writing.**
| **Manuscript Form** | **Manuscript Form** |
| **1.4 Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization.** | **1.4 Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization.**
| **1.5 Reflect appropriate manuscript requirements, including title page presentation, pagination, spacing and margins, and integration of source and support material (e.g., in-text citation, use of direct quotations, paraphrasing) with appropriate citations.** | **1.5 Reflect appropriate manuscript requirements, including title page presentation, pagination, spacing and margins, and integration of source and support material (e.g., in-text citation, use of direct quotations, paraphrasing) with appropriate citations.**

**Listening and Speaking Strategies**

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<td><strong>Comprehension</strong></td>
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| **1.1 Formulate judgments about the ideas under discussion and support those judgments with convincing evidence.** | **1.1 Recognize strategies used by the media to inform, persuade, entertain, and transmit culture (e.g., advertisements; perpetuation of stereotypes; use of visual representations, special effects, language).**
| **1.2 Compare and contrast the ways in which media genres (e.g., televised news, news magazines, documentaries, online information) cover the same event.** | **1.2 Analyze the impact of the media on the democratic process (e.g., exerting influence on elections, creating images of leaders, shaping attitudes) at the local, state, and national levels.**
| **Organization and Delivery of Oral Communication** | **Organization and Delivery of Oral Communication** |
| **1.3 Choose logical patterns of organization (e.g., chronological, topical, cause and effect) to inform and to persuade, by soliciting agreement or action, or to unite audiences behind a common belief or cause.** | **1.3 Interpret and evaluate the various ways in which events are presented and information is communicated by visual image makers (e.g., graphic artists, documentary filmmakers, illustrators, news photographers).**
| **1.4 Choose appropriate techniques for developing the introduction and conclusion (e.g., by using literary quotations, anecdotes, references to authoritative sources).** | **1.4 Use rhetorical questions, parallel structure, concrete images, figurative language, characterization, irony, and dialogue to achieve clarity, force, and aesthetic effect.**
| **1.5 Recognize and use elements of classical speech forms (e.g., introduction, first and second transitions, body, conclusion) in formulating rational arguments and applying the art of persuasion and debate.** | **1.5 Distinguish between and use various forms of classical contemporary logical arguments, including:**
| **1.6 Present and advance a clear thesis statement and choose appropriate types of proof (e.g., statistics, testimony, specific instances) that meet standard tests for evidence, including credibility, validity, and relevance.** | **a. Inductive and deductive reasoning**
| **1.7 Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.** | **b. Syllogisms and analogies**
| **1.8 Produce concise notes for extemporaneous delivery.** | **1.6 Use logical, ethical, and emotional appeals that enhance a specific tone and purpose.**
| **1.9 Analyze the occasion and the Interests of the audience and choose effective verbal and nonverbal techniques (e.g., voice, gestures, eye contact) for** | **1.7 Use appropriate rehearsal strategies to pay attention to performance details, achieve command of the text, and create skillful artistic staging.**
| **presentation.** | **1.8 Use effective and interesting language, including:**
| **1.10 Produce a clear and compelling presentation that engages the audience.** | **a. Informal expressions for effect**
| **11th & 12th** | **b. Standard American English for clarity**
| **1.11 Recognize the significance of effective presentation skills.** | **c. Technical language for specificity**
| **1.12 Use voice, gestures, and eye contact to enhance communication.** | **1.9 Use research and analysis to justify strategies for gesture, movement, and vocalization, including dialect,**
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<td>Presentations. Analysis and Evaluation of Oral and Media Communications 1.10 Analyze historically significant Speeches (e.g., Abraham Lincoln’s “Gettysburg Address,” Martin Luther King, Jr.’s “I have a Dream”) to find the rhetorical devices and features that make them memorable. 1.11 Assess how language and delivery affect the mood and tone of the oral communication and make an impact on the audience. 1.12 Evaluate the clarity, quality, effectiveness, and general coherence of a speaker’s important points, arguments, evidence, organization of ideas, delivery, diction, and syntax. 1.13 Analyze the types of arguments used by the speaker, including argument by causation, analogy, authority, emotion, and logic. 1.14 Identify the aesthetic effects of a media presentation and evaluate the techniques used to create them (e.g., compare Shakespeare’s Henry V with Kenneth Branagh’s film version).</td>
<td>pronunciation, and enunciation. 1.10 Evaluate when to use different kinds of effects (e.g., visual, music, sound, graphics) to create effective productions. Analysis and Evaluation of Oral and Media Communications 1.11 Critique a speaker’s diction and syntax in relation to the purpose of an oral communication and the impact the words may have on the audience. 1.12 Identify logical fallacies used in oral addresses (e.g., attack ad hominen, false causality, red herring, overgeneralization, bandwagon effect).</td>
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### Listening and Speaking Applications

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| 2.1 Deliver narrative presentations:  a. Narrate a sequence of events and communicate their significance to the audience.  b. Locate scenes and incidents in specific places.  c. Describe with concrete sensory details the sights, sounds, and smells of a scene and the specific actions, movements, gestures, and feelings of characters.  d. Pace the presentation of actions to accommodate time or mood changes.  2.2 Deliver expository presentations:  1. Marshal evidence in support of a thesis and related claims, including information on all relevant perspectives.  2. Convey information and ideas from primary and secondary sources accurately and coherently.  3. Make distinctions between the relative value and significance of specific data, facts, and ideas.  4. Include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.  5. Anticipate and address the listener’s potential misunderstandings, biases, and expectations.  6. Use technical terms and notations accurately.  2.3 Apply appropriate interviewing techniques:  1. Prepare and ask relevant questions.  2. Make notes of responses.  3. Use language that conveys maturity, sensitivity, and respect.  4. Respond correctly and effectively to questions.  5. Demonstrate knowledge of the subject or organization.  6. Compile and report responses. | 2.1 Write fictional, autobiographical, or biographical narratives:  1. Narrate a sequence of events and communicate their significance to the audience.  2. Locate scenes and incidents in specific places.  3. Describe with concrete sensory details the sights, sounds, and smells of a scene and monologue to depict the characters’ feelings.  4. Pace the presentation of actions to accommodate temporal, spatial, and dramatic mood changes.  5. Make effective use of descriptions of appearance, images, shifting perspectives, and sensory details.  2.2 Write responses to literature:  a. Demonstrate a comprehensive understanding of the significant ideas in works or passages.  b. Analyze the use of imagery, language, universal themes, and unique aspects of the text.  c. Support important ideas and viewpoints through accurate and detailed references to the text and to other works.  d. Demonstrate an understanding of the author’s use of stylistic devices and an appreciation of the effects created.  e. Identify and assess the impact of perceived ambiguities, nuances, and complexities within the text.  2.3 Write reflective compositions:  1. Explore the significance of personal experiences, events, conditions, or concerns by using rhetorical strategies (e.g., narration, description, exposition, persuasion).  2. Draw comparisons between specific incidents and broader themes that illustrate the writer’s important
7. Evaluate the effectiveness of the interview.
   2.4 Deliver oral responses to literature:
      1. Advance a judgment demonstrating a comprehensive grasp of the significant ideas of works or passages (i.e., make and support warranted assertions about the text).
      2. Support important ideas and viewpoints through accurate and detailed references to the text or to other works.
      3. Demonstrate awareness of the author’s use of stylistic devices and an appreciation of the effects created.
      4. Identify and assess the impact of perceived ambiguities, nuances, and complexities within the text.
   2.5 Deliver persuasive arguments (including evaluation and analysis of problems and solutions and causes and effects):
      a. Structure ideas and arguments in a coherent, logical fashion.
      b. Select rhetorical devices to support assertions (e.g., by appeal to logic through reasoning; by appeal to emotion or ethical belief; by use of personal anecdote, case study, or analogy).
      c. Clarify and defend positions with precise and relevant evidence, including facts, expert opinions, quotations, expressions of commonly accepted beliefs, and logical reasoning.
      d. Anticipate and address the listener’s concerns and counterarguments.
   2.6 Deliver descriptive presentations:
      1. Establish clearly the speaker’s point of view on the subject of the presentation.
      2. Establish clearly the speaker’s relationship with that subject (e.g., dispassionate observation, personal involvement).
      3. Use effective, factual descriptions of appearance, concrete images, shifting perspectives and vantage points, and sensory details.

   3. Maintain a balance in describing individual incidents and relate those incidents to more general and abstract ideas.
   2.4 Write historical investigation reports:
      1. Use exposition, narration, description, argumentation, exposition, or some combination of rhetorical strategies to support the main proposition.
      2. Analyze several historical records of a single event, examining critical relationships between elements of the research topic.
      3. Explain the perceived reason or reasons for the similarities and differences in historical records and information derived from primary and secondary sources to support or enhance the presentation.
      4. Include information from all relevant perspectives and take into consideration the validity and reliability of sources.
      5. Include a formal bibliography.
   2.5 Write job applications and résumés:
      a. Provide clear and purposeful information and address the intended audience appropriately.
      b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
      c. Modify the tone to fit the purpose and audience.
      d. Follow the conventional style for that type of document (e.g., résumés, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.
   2.6 Deliver multimedia presentations:
      a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
      b. Select an appropriate medium for each element of the presentation.
      c. Use the selected media skillfully, editing appropriately and monitoring for quality.
      d. Test the audience’s response and revise the presentation accordingly.

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**Math Standards**

**Algebra 1 (For students who may not have taken in 8th Grade)**

Symbolic reasoning and calculations with symbols are central in algebra. Through the study of algebra, a student will develop an understanding of the symbolic language of mathematics and the sciences. In addition, algebraic skills and concepts are developed and will be used in a wide variety of problem-solving situations.

1.0 Students identify and use the arithmetic properties of subsets of integers and rational, irrational, and real numbers, including closure properties for the four basic arithmetic operations where applicable:
   1.1 Students use properties of numbers to demonstrate whether assertions are true or false.
   2.0 Students understand and use such operations as taking the opposite, finding the reciprocal, taking a root,
and raising to a fractional power. They understand and use the rules of exponents.

3.0 Students solve equations and inequalities involving absolute values.

4.0 Students simplify expressions before solving linear equations and inequalities in one variable, such as

\[3(2x-5) + 4(x-2) = 12.\]

5.0 Students solve multi-step problems, including word problems, involving linear equations and linear inequalities in one variable and provide justification for each step.

6.0 Students graph a linear equation and compute the x- and y-intercepts (e.g., graph \(2x + 6y = 4\)). They are also able to sketch the region defined by linear inequality (e.g., they sketch the region defined by \(2x + 6y < 4\)).

7.0 Students verify that a point lies on a line, given an equation of the line. Students are able to derive linear equations by using the point-slope formula.

8.0 Students understand the concepts of parallel lines and perpendicular lines and how those slopes are related. Students are able to find the equation of a line perpendicular to a given line that passes through a given point.

9.0 Students solve a system of two linear equations in two variables algebraically and are able to interpret the answer graphically. Students are able to solve a system of two linear inequalities in two variables and to sketch the solution sets.

10.0 Students add, subtract, multiply, and divide monomials and polynomials. Students solve multi-step problems, including word problems, by using these techniques.

11.0 Students apply basic factoring techniques to second- and simple third-degree polynomials. These techniques include finding a common factor for all terms in a polynomial, recognizing the difference of two squares, and recognizing perfect squares of binomials.

12.0 Students simplify fractions with polynomials in the numerator and denominator by factoring both and reducing them to the lowest terms.

13.0 Students add, subtract, multiply, and divide rational expressions and functions. Students solve both computationally and conceptually challenging problems by using these techniques.

14.0 Students solve a quadratic equation by factoring or completing the square.

15.0 Students apply algebraic techniques to solve rate problems, work problems, and percent mixture problems.

16.0 Students understand the concepts of a relation and a function, determine whether a given relation defines a function, and give pertinent information about given relations and functions.

17.0 Students determine the domain of independent variables and the range of dependent variables defined by a graph, a set of ordered pairs, or a symbolic expression.

18.0 Students determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify the conclusion.

19.0 Students know the quadratic formula and are familiar with its proof by completing the square.

20.0 Students use the quadratic formula to find the roots of a second-degree polynomial and to solve quadratic equations.

21.0 Students graph quadratic functions and know that their roots are the x-intercepts.

22.0 Students use the quadratic formula or factoring techniques or both to determine whether the graph of a quadratic function will intersect the x-axis in zero, one, or two points.

23.0 Students apply quadratic equations to physical problems, such as the motion of an object under the force of gravity.

24.0 Students use and know simple aspects of a logical argument:

24.1 Students explain the difference between inductive and deductive reasoning and identify and provide examples of each.

24.2 Students identify the hypothesis and conclusion in logical deduction.

24.3 Students use counterexamples to show that an assertion is false and recognize that a single counterexample is sufficient to refute an assertion.

25.0 Students use properties of the number system to judge the validity of results, to justify each step of a procedure, and to prove or disprove statements:

25.1 Students use properties of numbers to construct simple, valid arguments (direct and indirect) for, or formulate counterexamples to, claimed assertions.

25.2 Students judge the validity of an argument according to whether the properties of the real number system and the order of operations have been applied correctly at each step.

25.3 Given a specific algebraic statement involving linear, quadratic, or absolute value expressions or equations or inequalities, students determine whether the statement is true sometimes, always, or never.
Geometry
The geometry skills and concepts developed in this discipline are useful to all students. Aside from learning these skills and concepts, students will develop their ability to construct formal, logical arguments and proofs in geometric settings and problems.

1.0 Students demonstrate understanding by identifying and giving examples of undefined terms, axioms, theorems, and inductive and deductive reasoning.
2.0 Students write geometric proofs, including proofs by contradiction.
3.0 Students construct and judge the validity of a logical argument and give counter examples to disprove a statement.
4.0 Students prove basic theorems involving congruence and similarity.
5.0 Students prove that triangles are congruent or similar, and they are able to use the concept of corresponding parts of congruent triangles.
6.0 Students know and are able to use the triangle inequality theorem.
7.0 Students prove and use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.
8.0 Students know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.
9.0 Students compute the volumes and surface areas of prisms, pyramids, cylinders, cones, and spheres; and students commit to memory the formulas for prisms, pyramids, and cylinders.
10.0 Students compute areas of polygons, including rectangles, scalene triangles, equilateral triangles, rhombi, parallelograms, and trapezoids.
11.0 Students determine how changes in dimensions affect the perimeter, area, and volume of common geometric figures and solids.
12.0 Students find and use measures of sides and of interior and exterior angles of triangles and polygons to classify figures and solve problems.
13.0 Students prove relationships between angles in polygons by using properties of complementary, supplementary, vertical, and exterior angles.
14.0 Students prove the Pythagorean theorem.
15.0 Students use the Pythagorean theorem to determine distance and find missing lengths of sides of right triangles.
16.0 Students perform basic constructions with a straightedge and compass, such as angle bisectors, perpendicular bisectors, and the line parallel to a given line through a point off the line.
17.0 Students prove theorems by using coordinate geometry, including the midpoint of a line segment, the distance formula, and various forms of equations of lines and circles.
18.0 Students know the definitions of the basic trigonometric functions defined by the angles of a right triangle.
They also know and are able to use elementary relationships between them. For example, tan(x) = sin(x)/cos(x), (sin(x))^2 + (cos(x))^2 = 1.
19.0 Students use trigonometric functions to solve for an unknown length of a side of a right triangle, given an angle and a length of a side.
20.0 Students know and are able to use angle and side relationships in problems with special right triangles, such as 30°, 60°, and 90° triangles and 45°, 45°, and 90° triangles.
21.0 Students prove and solve problems regarding relationships among chords, secants, tangents, inscribed angles, and inscribed and circumscribed polygons of circles.
22.0 Students prove relationships among chords, secants, tangents, inscribed angles, and inscribed and circumscribed polygons of circles.

Algebra II
This discipline complements and expands the mathematical content and concepts of Algebra I and Geometry. Students who master Algebra II will gain experience with algebraic solutions of problems in various content areas, including the solution of systems of quadratic equations, logarithmic and exponential functions, the binomial theorem, and the complex number system.

1.0 Students solve equations and inequalities involving absolute value.
2.0 Students solve systems of linear equations and inequalities (in two or three variables) by substitution, with graphs, or with matrices.
3.0 Students are adept at operations on polynomials, including long division.
4.0 Students factor polynomials representing the difference of squares, perfect square trinomials, and the sum and difference of two cubes.
5.0 Students demonstrate knowledge of how real and complex numbers are related both arithmetically and graphically. In particular, they can plot complex numbers as points in the plane.
6.0 Students add, subtract, multiply, and divide complex numbers.
7.0 Students add, subtract, multiply, divide, reduce, and evaluate rational expressions with monomial and polynomial denominators and simplify complicated rational expressions, including those with negative exponents in the denominator.
8.0 Students solve and graph quadratic equations by factoring, completing the square, or using the quadratic formula. Students apply these techniques in solving word problems. They also solve quadratic equations in the complex number system.
9.0 Students demonstrate and explain the effect that changing a coefficient has on the graph of quadratic functions; that is, students can determine how the graph of a parabola changes as a, b, and c vary in the equation $y = a(x-b)^2 + c$.
10.0 Students graph quadratic functions and determine the maxima, minima, and zeros of the function.
11.0 Students prove simple laws of logarithms.
11.1 Students understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.
11.2 Students judge the validity of an argument according to whether the properties of real numbers, exponents, and logarithms have been applied correctly at each step.
12.0 Students know the laws of fractional exponents, understand exponential functions, and use these functions in problems involving exponential growth and decay.
13.0 Students use the definition of logarithms to translate between logarithms in any base.
14.0 Students understand and use the properties of logarithms to simplify logarithmic numeric expressions and to identify their approximate values.
15.0 Students determine whether a specific algebraic statement involving rational expressions, radical expressions, or logarithmic or exponential functions is sometimes true, always true, or never true.
16.0 Students demonstrate and explain how the geometry of the graph of a conic section (e.g., asymptotes, foci, eccentricity) depends on the coefficients of the quadratic equation representing it.
17.0 Given a quadratic equation of the form $ax^2 + by^2 + cx + dy + e = 0$, students can use the method for completing the square to put the equation into standard form and can recognize whether the graph of the equation is a circle, ellipse, parabola, or hyperbola. Students can then graph the equation.
18.0 Students use fundamental counting principles to compute combinations and permutations.
19.0 Students use combinations and permutations to compute probabilities.
20.0 Students know the binomial theorem and use it to expand binomial expressions that are raised to positive integer powers.
21.0 Students apply the method of mathematical induction to prove general statements about the positive integers.
22.0 Students find the general term and the sums of arithmetic series and of both finite and infinite geometric series.
23.0 Students derive the summation formulas for arithmetic series and for both finite and infinite geometric series.
24.0 Students solve problems involving functional concepts, such as composition, defining the inverse function and performing arithmetic operations on functions.
25.0 Students use properties from number systems to justify steps in combining and simplifying functions.

### Trigonometry / Pre Calculus

Trigonometry uses the techniques that students have previously learned from the study of Algebra and Geometry. The trigonometric functions studied are defined geometrically rather than in terms of algebraic equations. Facility with these functions as well as the ability to prove basic identities regarding them is especially important for students intending to study Calculus, more advanced mathematics, Physics and other sciences, and engineering in college.

Trigonometry uses the techniques that students have previously learned from the study of algebra and
geometry. The trigonometric functions studied are defined geometrically rather than in terms of algebraic equations. Facility with these functions as well as the ability to prove basic identities regarding them is especially important for students intending to study calculus, more advanced mathematics, physics and other sciences, and engineering in college.

1.0 Students understand the notion of angle and how to measure it, in both degrees and radians. They can convert between degrees and radians.

2.0 Students know the definition of sine and cosine as y-and x-coordinates of points on the unit circle and are familiar with the graphs of the sine and cosine functions.

3.0 Students know the identity \( \cos^2(x) + \sin^2(x) = 1 \):

3.1 Students prove that this identity is equivalent to the Pythagorean theorem (i.e., students can prove this identity by using the Pythagorean theorem and, conversely, they can prove the Pythagorean theorem as a consequence of this identity).

3.2 Students prove other trigonometric identities and simplify others by using the identity \( \cos^2(x) + \sin^2(x) = 1 \).

For example, students use this identity to prove that \( \sec^2(x) = \tan^2(x) + 1 \).

4.0 Students graph functions of the form \( f(t) = A \sin(Bt + C) \) or \( f(t) = A \cos(Bt + C) \) and interpret \( A \), \( B \), and \( C \) in terms of amplitude, frequency, period, and phase shift.

5.0 Students know the definitions of the tangent and cotangent functions and can graph them.

6.0 Students know the definitions of the secant and cosecant functions and can graph them.

7.0 Students know that the tangent of the angle that a line makes with the x-axis is equal to the slope of the line.

8.0 Students know the definitions of the inverse trigonometric functions and can graph the functions.

9.0 Students compute, by hand, the values of the trigonometric functions and the inverse trigonometric functions at various standard points.

10.0 Students demonstrate an understanding of the addition formulas for sines and cosines and their proofs and can use those formulas to prove and/or simplify other trigonometric identities.

11.0 Students demonstrate an understanding of half-angle and double-angle formulas for sines and cosines and can use those formulas to prove and/or simplify other trigonometric identities.

12.0 Students use trigonometry to determine unknown sides or angles in right triangles.

13.0 Students know the law of sines and the law of cosines and apply those laws to solve problems.

14.0 Students determine the area of a triangle, given one angle and the two adjacent sides.

15.0 Students are familiar with polar coordinates. In particular, they can determine polar coordinates of a point given in rectangular coordinates and vice versa.

16.0 Students represent equations given in rectangular coordinates in terms of polar coordinates.

17.0 Students are familiar with complex numbers. They can represent a complex number in polar form and know how to multiply complex numbers in their polar form.

18.0 Students know DeMoivre's theorem and can give nth roots of a complex number given in polar form.

19.0 Students are adept at using trigonometry in a variety of applications and word problems.

Mathematical Analysis

This discipline combines many of the trigonometric, geometric, and algebraic techniques needed to prepare students for the study of Calculus and strengthens their conceptual understanding of problems and mathematical reasoning in solving problems. These standards take a functional point of view toward those topics. The most significant new concept is that of limits. Mathematical analysis will be combined with a course in Trigonometry or perhaps with to make a yearlong pre-Calculus course.

1.0 Students are familiar with, and can apply, polar coordinates and vectors in the plane. In particular, they can translate between polar and rectangular coordinates and can interpret polar coordinates and vectors graphically.
2.0 Students are adept at the arithmetic of complex numbers. They can use the trigonometric form of complex numbers and understand that a function of a complex variable can be viewed as a function of two real variables. They know the proof of DeMoivre's theorem.

3.0 Students can give proofs of various formulas by using the technique of mathematical induction.

4.0 Students know the statement of, and can apply, the fundamental theorem of algebra.

5.0 Students are familiar with conic sections, both analytically and geometrically:

5.1 Students can take a quadratic equation in two variables; put it in standard form by completing the square and using rotations and translations, if necessary; determine what type of conic section the equation represents; and determine its geometric components (foci, asymptotes, and so forth).

5.2 Students can take a geometric description of a conic section - for example, the locus of points whose sum of its distances from (1, 0) and (-1, 0) is 6 - and derive a quadratic equation representing it.

6.0 Students find the roots and poles of a rational function and can graph the function and locate its asymptotes.

7.0 Students demonstrate an understanding of functions and equations defined parametrically and can graph them.

8.0 Students are familiar with the notion of the limit of a sequence and the limit of a function as the independent variable approaches a number or infinity. They determine whether certain sequences converge or diverge.

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**Linear Algebra**

The general goal in this discipline is for students to learn the techniques of matrix manipulation so that they can solve systems of linear equations in any number of variables. Linear algebra is most often combined with another subject, such as trigonometry, mathematical analysis, or pre calculus.

1.0 Students solve linear equations in any number of variables by using Gauss-Fremont elimination.

2.0 Students interpret linear systems as coefficient matrices and the Gauss-Fremont method as row operations on the coefficient matrix.

3.0 Students reduce rectangular matrices to row echelon form.

4.0 Students perform addition on matrices and vectors.

5.0 Students perform matrix multiplication and multiply vectors by matrices and by scalars.

6.0 Students demonstrate an understanding that linear systems are inconsistent (have no solutions), have exactly one solution, or have infinitely many solutions.

7.0 Students demonstrate an understanding of the geometric interpretation of vectors and vector addition (by means of parallelograms) in the plane and in three-dimensional space.

8.0 Students interpret geometrically the solution sets of systems of equations. For example, the solution set of a single linear equation in two variables is interpreted as a line in the plane, and the solution set of a two-by-two system is interpreted as the intersection of a pair of lines in the plane.

9.0 Students demonstrate an understanding of the notion of the inverse to a square matrix and apply that concept to solve systems of linear equations.

10.0 Students compute the determinants of 2 x 2 and 3 x 3 matrices and are familiar with their geometric interpretations as the area and volume of the parallelepipeds spanned by the images under the matrices of the standard basis vectors in two-dimensional and three-dimensional spaces.

11.0 Students know that a square matrix is invertible if, and only if, its determinant is nonzero. They can compute the inverse to 2 x 2 and 3 x 3 matrices using row reduction methods or Cramer's rule.

12.0 Students compute the scalar (dot) product of two vectors in n-dimensional space and know that perpendicular vectors have zero dot product.

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**Probability and Statistics**

This discipline is an introduction to the study of probability, interpretation of data, and fundamental statistical problem solving. Mastery of this academic content will provide students with a solid foundation in probability and facility in processing statistical information.

This discipline is an introduction to the study of probability, interpretation of data, and fundamental statistical problem solving. Mastery of this academic content will provide students with a solid foundation in probability and facility in processing statistical information.

1.0 Students know the definition of the notion of independent events and can use the rules for addition, multiplication, and complementation to solve for probabilities of particular events in finite sample spaces.

2.0 Students know the definition of conditional probability and use it to solve for probabilities in finite sample spaces.
3.0 Students demonstrate an understanding of the notion of discrete random variables by using them to solve for the probabilities of outcomes, such as the probability of the occurrence of five heads in 14 coin tosses.

4.0 Students are familiar with the standard distributions (normal, binomial, and exponential) and can use them to solve for events in problems in which the distribution belongs to those families.

5.0 Students determine the mean and the standard deviation of a normally distributed random variable.

6.0 Students know the definitions of the mean, median, and mode of a distribution of data and can compute each in particular situations.

7.0 Students compute the variance and the standard deviation of a distribution of data.

8.0 Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatter plots, and box-and-whisker plots.

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**Advanced Placement Probability and Statistics**

This discipline is a technical and in-depth extension of probability and statistics. In particular, mastery of academic content for advanced placement gives students the background to succeed in the Advanced Placement examination in the subject.

1.0 Students solve probability problems with finite sample spaces by using the rules for addition, multiplication, and complementation for probability distributions and understand the simplifications that arise with independent events.

2.0 Students know the definition of conditional probability and use it to solve for probabilities in finite sample spaces. 3.0 Students demonstrate an understanding of the notion of discrete random variables by using this concept to solve for the probabilities of outcomes, such as the probability of the occurrence of five or fewer heads in 14 coin tosses.

4.0 Students understand the notion of a continuous random variable and can interpret the probability of an outcome as the area of a region under the graph of the probability density function associated with the random variable.

5.0 Students know the definition of the mean of a discrete random variable and can determine the mean for a particular discrete random variable.

6.0 Students know the definition of the variance of a discrete random variable and can determine the variance for a particular discrete random variable.

7.0 Students demonstrate an understanding of the standard distributions (normal, binomial, and exponential) and can use the distributions to solve for events in problems in which the distribution belongs to those families.

8.0 Students determine the mean and the standard deviation of a normally distributed random variable.

9.0 Students know the central limit theorem and can use it to obtain approximations for probabilities in problems of finite sample spaces in which the probabilities are distributed binomially.

10.0 Students know the definitions of the mean, median, and mode of distribution of data.

11.0 Students compute the variance and the standard deviation of a distribution of data.

12.0 Students find the line of best fit to a given distribution of data by using least squares regression.

13.0 Students know what the correlation coefficient of two variables means and are familiar with the coefficient's properties.

14.0 Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line graphs and bar graphs, stem-and-leaf displays, scatter plots, and box-and-whisker plots.

15.0 Students are familiar with the notions of a statistic of a distribution of values, of the sampling distribution of a statistic, and of the variability of a statistic.

16.0 Students know basic facts concerning the relation between the mean and the standard deviation of a sampling distribution and the mean and the standard deviation of the population distribution.

17.0 Students determine confidence intervals for a simple random sample from a normal distribution of data and determine the sample size required for a desired margin of error.

18.0 Students determine the P-value for a statistic for a simple random sample from a normal distribution.

19.0 Students are familiar with the chi-square distribution and chi-square test and understand their uses.

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**Calculus**

At Math and Science College Prep, Calculus will be presented with the same level of depth and rigor as are entry-level college and university Calculus courses. The standards covered will outline a complete college
Math and Science College Prep will utilize the College Board syllabi for the Calculus AB and Calculus BC sections (a two-year course) of the Advanced Placement Examination in Mathematics. When taught in high school, calculus should be presented with the same level of depth and rigor as are entry-level college and university calculus courses. Calculus is a widely applied area of mathematics and involves a beautiful intrinsic theory. Students mastering this content will be exposed to both aspects of the subject.

1.0 Students demonstrate knowledge of both the formal definition and the graphical interpretation of limit of values of functions. This knowledge includes one-sided limits, infinite limits, and limits at infinity. Students know the definition of convergence and divergence of a function as the domain variable approaches either a number or infinity:

1.1 Students prove and use theorems evaluating the limits of sums, products, quotients, and composition of functions.

1.2 Students use graphical calculators to verify and estimate limits.

1.3 Students prove and use special limits, such as the limits of \((\sin(x))/x\) and \((1 - \cos(x))/x\) as \(x\) tends to 0.

2.0 Students demonstrate knowledge of both the formal definition and the graphical interpretation of continuity of a function.

3.0 Students demonstrate an understanding and the application of the intermediate value theorem and the extreme value theorem.

4.0 Students demonstrate an understanding of the formal definition of the derivative of a function at a point and the notion of differentiability:

4.1 Students demonstrate an understanding of the derivative of a function as the slope of the tangent line to the graph of the function.

4.2 Students demonstrate an understanding of the interpretation of the derivative as an instantaneous rate of change. Students can use derivatives to solve a variety of problems from physics, chemistry, economics, and so forth that involve the rate of change of a function.

4.3 Students understand the relation between differentiability and continuity.

4.4 Students derive derivative formulas and use them to find the derivatives of algebraic, trigonometric, inverse trigonometric, exponential, and logarithmic functions.

5.0 Students know the chain rule and its proof and applications to the calculation of the derivative of a variety of composite functions.

6.0 Students find the derivatives of parametrically defined functions and use implicit differentiation in a wide variety of problems in physics, chemistry, economics, and so forth.

7.0 Students compute derivatives of higher orders.

8.0 Students know and can apply Rolle's theorem, the mean value theorem, and L'Hôpital's rule.

9.0 Students use differentiation to sketch, by hand, graphs of functions. They can identify maxima, minima, inflection points, and intervals in which the function is increasing and decreasing.

10.0 Students know Newton's method for approximating the zeros of a function.

11.0 Students use differentiation to solve optimization (maximum-minimum problems) in a variety of pure and applied contexts.

12.0 Students use differentiation to solve related rate problems in a variety of pure and applied contexts.

13.0 Students know the definition of the definite integral by using Riemann sums. They use this definition to approximate integrals.

14.0 Students apply the definition of the integral to model problems in physics, economics, and so forth, obtaining results in terms of integrals.

15.0 Students demonstrate knowledge and proof of the fundamental theorem of calculus and use it to interpret integrals as anti derivatives.

16.0 Students use definite integrals in problems involving area, velocity, acceleration, volume of a solid, area of a surface of revolution, length of a curve, and work.

17.0 Students compute, by hand, the integrals of a wide variety of functions by using techniques of integration, such as substitution, integration by parts, and trigonometric substitution. They can also combine these techniques when appropriate.

18.0 Students know the definitions and properties of inverse trigonometric functions and the expression of these functions as indefinite integrals.

19.0 Students compute, by hand, the integrals of rational functions by combining the techniques in standard 17.0 with the algebraic techniques of partial fractions and completing the square.

20.0 Students compute the integrals of trigonometric functions by using the techniques noted above.

21.0 Students understand the algorithms involved in Simpson's rule and Newton's method. They use calculators or computers or both to approximate integrals numerically.

22.0 Students understand improper integrals as limits of definite integrals.
23.0 Students demonstrate an understanding of the definitions of convergence and divergence of sequences and series of real numbers. By using such tests as the comparison test, ratio test, and alternate series test, they can determine whether a series converges.

24.0 Students understand and can compute the radius (interval) of the convergence of power series.

25.0 Students differentiate and integrate the terms of a power series in order to form new series from known ones.

26.0 Students calculate Taylor polynomials and Taylor series of basic functions, including the remainder term.

27.0 Students know the techniques of solution of selected elementary differential equations and their applications to a wide variety of situations, including growth-and-decay problems.

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**History / Social Science Content, Grades 10-12**

**GRADE 10: WORLD HISTORY, CULTURE, AND GEOGRAPHY: THE MODERN WORLD**

Students in grade ten study major turning points that shaped the modern world, from the late eighteenth century through the present, including the cause and course of the two world wars. They trace the rise of democratic ideas and develop an understanding of the historical roots of current world issues, especially as they pertain to international relations. They extrapolate from the American experience that democratic ideals are often achieved at a high price, remain vulnerable, and are not practiced everywhere in the world. Students develop an understanding of current world issues and relate them to their historical, geographic, political, economic, and cultural contexts. Students consider multiple accounts of events in order to understand international relations from a variety of perspectives.
10.1 Students relate the moral and ethical principles in ancient Greek and Roman philosophy, in Judaism, and in Christianity to the development of Western political thought.
   - Analyze the similarities and differences in Judeo-Christian and Greco-Roman views of law, reason and faith, and duties of the individual.
   - Trace the development of the Western political ideas of the rule of law and illegitimacy of tyranny, using selections from Plato's Republic and Aristotle's Politics.
   - Consider the influence of the U.S. Constitution on political systems in the contemporary world.

10.2 Students compare and contrast the Glorious Revolution of England, the American Revolution, and the French Revolution and their enduring effects worldwide on the political expectations for self-government and individual liberty.
   - Compare the major ideas of philosophers and their effects on the democratic revolutions in England, the United States, France, and Latin America (e.g., John Locke, Charles-Louis Montesquieu, Jean-Jacques Rousseau, Simón Bolívar, Thomas Jefferson, James Madison).
   - List the principles of the Magna Carta, the English Bill of Rights (1689), the American Declaration of Independence (1776), the French Declaration of the Rights of Man and the Citizen (1789), and the U.S. Bill of Rights (1791).
   - Understand the unique character of the American Revolution, its spread to other parts of the world, and its continuing significance to other nations.
   - Explain how the ideology of the French Revolution led France to develop from constitutional monarchy to democratic despotism to the Napoleonic empire.
   - Discuss how nationalism spread across Europe with Napoleon but was repressed for a generation under the Congress of Vienna and Concert of Europe until the Revolutions of 1848.

10.3 Students analyze the effects of the Industrial Revolution in England, France, Germany, Japan, and the United States.
   - Analyze why England was the first country to industrialize.
   - Examine how scientific and technological changes and new forms of energy brought about massive social, economic, and cultural change (e.g., the inventions and discoveries of James Watt, Eli Whitney, Henry Bessemer, Louis Pasteur, Thomas Edison).
   - Describe the growth of population, rural to urban migration, and growth of cities associated with the Industrial Revolution.
   - Trace the evolution of work and labor, including the demise of the slave trade and the effects of immigration, mining and manufacturing, division of labor, and the union movement.
   - Understand the connections among natural resources, entrepreneurship, labor, and capital in an industrial economy.
   - Analyze the emergence of capitalism as a dominant economic pattern and the responses to it, including Utopianism, Social Democracy, Socialism, and Communism.
   - Describe the emergence of Romanticism in art and literature (e.g., the poetry of William Blake and William Wordsworth), social criticism (e.g., the novels of Charles Dickens), and the move away from Classicism in Europe.

10.4 Students analyze patterns of global change in the era of New Imperialism in at least two of the following regions or countries: Africa, Southeast Asia, China, India, Latin America, and the Philippines.
   1) Describe the rise of industrial economies and their link to imperialism and colonial-ism (e.g., the role played by national security and strategic advantage; moral issues raised by the search for national hegemony, Social Darwinism, and the missionary impulse; material issues such as land, resources, and technology).
   2) Discuss the locations of the colonial rule of such nations as England, France, Germany, Italy, Japan, the Netherlands, Russia, Spain, Portugal, and the United States.
   3) Explain imperialism from the perspective of the colonizers and the colonized and the varied immediate and long-term responses by the people under colonial rule.
4) Describe the independence struggles of the colonized regions of the world, including the roles of leaders, such as Sun Yat-sen in China, and the roles of ideology and religion.

### 10.5 Students analyze the causes and course of the First World War.

1. Analyze the arguments for entering into war presented by leaders from all sides of the Great War and the role of political and economic rivalries, ethnic and ideological conflicts, domestic discontent and disorder, and propaganda and nationalism in mobilizing the civilian population in support of "total war."
2. Examine the principal theaters of battle, major turning points, and the importance of geographic factors in military decisions and outcomes (e.g., topography, waterways, distance, climate). Explain how the Russian Revolution and the entry of the United States affected the course and outcome of the war.
3. Understand the nature of the war and its human costs (military and civilian) on all sides of the conflict, including how colonial peoples contributed to the war effort.
4. Discuss human rights violations and genocide, including the Ottoman government's actions against Armenian citizens.

### 10.6 Students analyze the effects of the First World War.

1. Analyze the aims and negotiating roles of world leaders, the terms and influence of the Treaty of Versailles and Woodrow Wilson's Fourteen Points, and the causes and effects of the United States's rejection of the League of Nations on world politics.
2. Describe the effects of the war and resulting peace treaties on population movement, the international economy, and shifts in the geographic and political borders of Europe and the Middle East.
3. Understand the widespread disillusionment with prewar institutions, authorities, and values that resulted in a void that was later filled by totalitarians.
4. Discuss the influence of World War I on literature, art, and intellectual life in the West (e.g., Pablo Picasso, the "lost generation" of Gertrude Stein, Ernest Hemingway).
5. in the murder of six million Jewish civilians.
6. Discuss the human costs of the war, with particular attention to the civilian and military losses in Russia, Germany, Britain, the United States, China, and Japan.
7. need for a Jewish state, and the significance and effects of the location and establishment of Israel on world affairs.
8. Analyze the reasons for the collapse of the Soviet Union, including the weakness of the command economy, burdens of military commitments, and growing resistance to Soviet rule by dissidents in satellite states and the non-Russian Soviet republics.

### 10.7 Students analyze the rise of totalitarian governments after World War I.

1. Understand the causes and consequences of the Russian Revolution, including Lenin's use of totalitarian means to seize and maintain control (e.g., the Gulag).
2. Trace Stalin's rise to power in the Soviet Union and the connection between economic policies, political policies, the absence of a free press, and systematic violations of human rights (e.g., the Terror Famine in Ukraine).
3. Analyze the rise, aggression, and human costs of totalitarian regimes (Fascist and Communist) in Germany, Italy, and the Soviet Union, noting especially their common and dissimilar traits.
4. Understand the role of appeasement, nonintervention (isolationism), and the domestic distractions in Europe and the United States prior to the outbreak of World War II.
5. Identify and locate the Allied and Axis powers on a map and discuss the major turning points of the war, the principal theaters of conflict, key strategic decisions, and the resulting war conferences and political resolutions, with emphasis on the importance of geographic factors
6. Describe the political, diplomatic, and military leaders during the war (e.g., Winston Churchill, Franklin Delano Roosevelt, Emperor Hirohito, Adolf Hitler, Benito Joseph Stalin, Douglas MacArthur, Dwight Eisenhower). the Nazi policy of pursuing racial purity, especially against the European Jews; its transformation into the Final Solution; and the Holocaust that resulted

### 10.8 Students analyze the causes and consequences of World War II.

1. Compare the German, Italian, and Japanese drives for empire in the 1930s, including the 1937 Rape of Nanking, other atrocities in China, and the Stalin-Hitler Pact of 1939.
2. Describe the recent history of the regions, including political divisions and systems, key leaders, religious issues, natural features, resources, and population paths.
3. Discuss the important trends in the regions today and whether they appear to serve the cause of individual freedom and democracy.

### 10.9 Students analyze the international developments in the post-World World War II world.
GRADE 10: WORLD HISTORY, CULTURE, AND GEOGRAPHY: THE MODERN WORLD

1. Compare the economic and military power shifts caused by the war, including the YaltaPact, the development of nuclear weapons, Soviet control over Eastern European nations, and the economic recoveries of Germany and Japan.

2. Analyze the causes of the Cold War, with the free world on one side and Soviet client states on the other, including competition for influence in such places as Egypt, the Congo, Vietnam, and Chile.

3. Understand the importance of the Truman Doctrine and the Marshall Plan, which established the pattern for America's postwar policy of supplying economic and military aid to prevent the spread of Communism and the resulting economic and political competition in arenas such as Southeast Asia (i.e., the Korean War, Vietnam War), Cuba, and Africa.

4. Analyze the Chinese Civil War, the rise of Mao Tse-tung, and the subsequent political and economic upheavals in China (e.g., the Great Leap Forward, the Cultural Revolution, and the Tiananmen Square uprising).

5. Describe the uprisings in Poland (1952), Hungary (1956), and Czechoslovakia (1968) and those countries' resurgence in the 1970s and 1980s as people in Soviet satellites sought freedom from Soviet control.

6. Understand how the forces of nationalism developed in the Middle East, how the Holocaust affected world opinion regarding the

10.10 Students analyze instances of nation-building in the contemporary world in at least two of the following regions or countries: the middle east, Africa, Mexico and other parts of Latin America, and China.

Understand the challenges in the regions, including their geopolitical, cultural, military, and economic significance and the international relationships in which they are involved.

10.11 Students analyze the integration of countries into the world economy and the information, technological, and communications revolutions (e.g., television, satellites, computers).

Grade 11: United States History and Geography: Continuity and Change in the Twentieth Century

Students in grade eleven will study the major turning points in American history in the twentieth century. Following a review of the nation's beginnings and the impact of the Enlightenment on U.S. democratic ideals, students will build upon the tenth grade study of global industrialization to understand the emergence and impact of new technology and a corporate economy, including the social and cultural effects. They trace the change in the ethnic composition of American society; the movement toward equal rights for racial minorities and women; and the role of the United States as a major world power. An emphasis will be placed on the expanding role of the federal government and federal courts as well as the continuing tension between the individual and the state. Students will consider the major social problems of our time and trace their causes in historical events. They will learn that the United States has served as a model for other nations and that the rights and freedoms we enjoy are not accidents, but the results of a defined set of political principles that are not always basic to citizens of other countries. Students understand that our rights under the U.S. Constitution are a precious inheritance that depends on an educated citizenry for their preservation and protection.

11.1 Students analyze the significant events in the founding of the nation and its attempts to realize the philosophy of government described in the Declaration of Independence.

1. Describe the Enlightenment and the rise of democratic ideas as the context in which the nation was founded.

2. Analyze the ideological origins of the American Revolution, the Founding Fathers' philosophy of divinely bestowed unalienable natural rights, the debates on the drafting and ratification of the Constitution, and the addition of the Bill of Rights.

3. Understand the history of the Constitution after 1787 with emphasis on federal versus state authority and growing democratization.

4. Examine the effects of the Civil War and Reconstruction and of the industrial revolution, including demographic shifts and the emergence in the late nineteenth century of the United States as a world power.

11.2 Students analyze the relationship among the rise of industrialization, large-scale rural-to-urban migration, and massive immigration from Southern and Eastern Europe.

1. Know the effects of industrialization on living and working conditions, including the portrayal of working conditions and food safety in Upton Sinclair's The Jungle.

2. Describe the changing landscape, including the growth of cities linked by industry and trade, and the development of cities divided according to race, ethnicity, and class.

3. Trace the effect of the Americanization
4. Analyze the effect of urban political machines and responses to them by immigrants and middle-class reformers.
5. Discuss corporate mergers that produced trusts and cartels and the economic and political policies of industrial leaders.
6. Trace the economic development of the United States and its emergence as a major industrial power, including its gains from trade and the advantages of its physical geography.
7. Analyze the similarities and differences between the ideologies of Social Darwinism and Social Gospel (e.g., using biographies of William Graham Sumner, Billy Sunday, Dwight L. Moody).
8. Examine the effect of political programs and activities of Populists.
9. Understand the effect of political programs and activities of the Progressives (e.g., federal regulation of railroad transport, Children's Bureau, the Sixteenth Amendment, Theodore Roosevelt, Hiram Johnson).
10. Students analyze the role religion played in the founding of America, its lasting moral, social, and political impacts, and issues regarding religious liberty.
   1. Describe the contributions of various religious groups to American civic principles and social reform movements (e.g., civil and human rights, individual responsibility and the work ethic, antimonarchy and self-rule, worker protection, family-centered communities).
   2. Analyze the great religious revivals and the leaders involved in them, including the Great Awakening, the Second Great Awakening, the Civil War revivals, the Social Gospel Movement, the rise of Christian liberal theology in the nineteenth century, the impact of the Second Vatican Council, and the rise of Christian fundamentalism in current times.
   3. Cite incidences of religious intolerance in the United States (e.g., persecution of Mormons, anti-Catholic sentiment, anti-Semitism).
   4. Discuss the expanding religious pluralism in the United States and California that resulted from large-scale immigration in the twentieth century.
   5. Describe the principles of religious liberty found in the Establishment and Free Exercise clauses of the First Amendment, including the debate on the issue of separation of church and state.
11. Students trace the rise of the United States to its role as a world power in the twentieth century.
   1. List the purpose and the effects of the Open Door policy. Describe the Spanish-American War and U.S. expansion in the South Pacific.
   2. Discuss America's role in the Panama Revolution and the building of the Panama Canal.
   4. Analyze the political, economic, and social ramifications of World War I on the home front.
   5. Trace the declining role of Great Britain and the expanding role of the United States in world affairs after World War II.
12. Students analyze the major political, social, economic, technological, and cultural developments of the 1920s.
   1. Discuss the policies of Presidents Warren Harding, Calvin Coolidge, and Herbert Hoover.
   2. Analyze the international and domestic events, interests, and philosophies that prompted attacks on civil liberties, including the Palmer Raids, Marcus Garvey's "back-to-Africa" movement, the Ku Klux Klan, and immigration quotas and the responses of organizations such as the American Civil Liberties Union, the National Association for the Advancement of Colored People, and the Anti-Defamation League to those attacks.
   3. Examine the passage of the Eighteenth Amendment to the Constitution and the Volstead Act (Prohibition).
   4. Analyze the passage of the Nineteenth Amendment and the changing role of women in society.
   5. Describe the Harlem Renaissance and new trends in literature, music, and art, with special attention to the work of writers (e.g., Zora Neale Hurston, Langston Hughes).
   6. Trace the growth and effects of radio and movies and their role in the worldwide diffusion of popular culture.
   7. Discuss the rise of mass production techniques, the growth of cities, the impact of new technologies (e.g., the automobile, electricity), and the resulting prosperity and effect on the American landscape.
13. Students analyze the different explanations for the Great Depression and how the New Deal fundamentally changed the role of the federal government.
   1. Describe the monetary issues of the late nineteenth and early twentieth centuries that gave rise to the establishment of the Federal Reserve and the weaknesses in key sectors of the economy in the late 1920s.
   2. Understand the explanations of the principal causes of the Great Depression and the steps taken by the Federal Reserve, Congress, and Presidents Herbert Hoover and Franklin Delano Roosevelt to combat the economic crisis.
Grade 11: United States History and Geography: Continuity and Change in the Twentieth Century

3. Discuss the human toll of the Depression, natural disasters, and unwise agricultural practices and their effects on the depopulation of rural regions and on political movements of the left and right, with particular attention to the Dust Bowl refugees and their social and economic impacts in California.

4. Analyze the effects of and the controversies arising from New Deal economic policies and the expanded role of the federal government in society and the economy since the 1930s (e.g., Works Progress Administration, Social Security, National Labor Relations Board, farm programs, regional development policies, and energy development projects such as the Tennessee Valley Authority, California Central Valley Project, and Bonneville Dam).

5. Trace the advances and retreats of organized labor, from the creation of the American Federation of Labor and the Congress of Industrial Organizations to current issues of a postindustrial, multinational economy, including the United Farm Workers in California.

11.7 Students analyze America's participation in World War II.

1. Examine the origins of American involvement in the war, with an emphasis on the events that precipitated the attack on Pearl Harbor.

2. Explain U.S. and Allied wartime strategy, including the major battles of Midway, Normandy, Iwo Jima, Okinawa, and the Battle of the Bulge.

3. Identify the roles and sacrifices of individual American soldiers, as well as the unique contributions of the special fighting forces (e.g., the Tuskegee Airmen, the 442nd Regimental Combat team, the Navajo Code Talkers).

4. Analyze Roosevelt's foreign policy during World War II (e.g., Four Freedoms speech).

5. Discuss the constitutional issues and impact of events on the U.S. home front, including the internment of Japanese Americans (e.g., Fred Korematsu v. United States of America) and the restrictions on German and Italian resident aliens; the response of the administration to Hitler's atrocities against Jews and other groups; the roles of women in military production; and the roles and growing political demands of African Americans.

6. Describe major developments in aviation, weaponry, communication, and medicine and the war's impact on the location of American industry and use of resources.

7. Discuss the decision to drop atomic bombs and the consequences of the decision (Hiroshima and Nagasaki).

8. Analyze the effect of massive aid given to Western Europe under the Marshall Plan to rebuild itself after the war and the importance of a rebuilt Europe to the U.S. economy.

11.8 Students analyze the economic boom and social transformation of post-World War II America.

1. Trace the growth of service sector, white collar, and professional sector jobs in business and government.

2. Describe the significance of Mexican immigration and its relationship to the agricultural economy, especially in California.

3. Examine Truman's labor policy and congressional reaction to it.

4. Analyze new federal government spending on defense, welfare, interest on the debt, and federal and state spending on education, including the California Master Plan.

5. Describe the increased powers of the presidency in response to the Great Depression, World War II, and the Cold War.

6. Discuss the diverse environmental regions of North America, their relationship to economies, and the origins and prospects of environmental problems in those regions.

7. Describe the effects on society and the economy of technological developments 1945, including the computer revolution, changes in communication, advances in medicine, and improvements in agricultural technology.

8. Discuss forms of popular culture, with emphasis on their origins and geographic diffusion (e.g., jazz and other forms of popular music, professional sports, architectural and artistic styles).

11.9 Students analyze U.S. foreign policy since World War II.

1. Discuss the establishment of the United Nations and International Declaration of Human Rights, International Monetary Fund, World Bank, and General Agreement on Tariffs and Trade (GATT) and their importance in shaping modern Europe and maintaining peace and international order.

2. Understand the role of military Alliances, including NATO and SEATO, in deterring communist aggression and maintaining security during the Cold War.

3. Trace the origins and geopolitical consequences (foreign and domestic) of the Cold War and containment policy, including the following: The era of McCarthyism, instances of domestic Communism (e.g., Alger Hiss) and blacklisting The Truman Doctrine, The Berlin Blockade, The Korean War, The Bay of Pigs invasion, and the Cuban Missile Crisis Atomic testing in the American West, the "mutual assured destruction" doctrine, and disarmament policies, The Vietnam War, Latin American policy

4. List the effects of foreign policy on domestic policies and vice versa (e.g., protests during the war in
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Vietnam, the "nuclear freeze" movement).

5. Analyze the role of the Reagan administration and other factors in the victory of the in the Cold War.

6. Describe U.S. Middle East policy and its strategic, political, and economic interests, including those related to the Gulf War.

7. Examine relations between the United States and Mexico in the twentieth century, including key economic, political, immigration, and environmental issues.

11.10 Students analyze the development of federal civil rights and voting rights.

1. Explain how demands of African Americans helped produce a stimulus for civil rights, including President Roosevelt’s ban on racial discrimination in defense industries in 1941, and how African Americans’ service in World War II produced a stimulus for President Truman’s decision to end segregation in the armed forces in 1948.


3. Describe the collaboration on legal strategy between African American and white civil rights lawyers to end racial segregation in higher education.

4. Examine the roles of civil rights advocates (e.g., A. Philip Randolph, Martin Luther King, Jr., Malcolm X, Thurgood Marshall, James Farmer, Rosa Parks), including the significance of Martin Luther King, Jr.’s “Letter from Birmingham Jail” and “I Have a Dream” speech.

5. Discuss the diffusion of the civil rights movement of African Americans from the churches of the rural South and the urban North, including the resistance to racial desegregation in Little Rock and Birmingham, and how the advances influenced the agendas, strategies, and effectiveness of the quests of American Indians, Asian Americans, and Hispanic Americans for civil rights and equal opportunities.

6. Analyze the passage and effects of civil rights and voting rights legislation (e.g., 1964 Civil Rights Act, Voting Rights Act of 1965) and the Twenty-Fourth Amendment, with an emphasis on equality of access to education and to the political process.

7. Analyze the women’s rights movement from the era of Elizabeth Stanton and Susan Anthony and the passage of the Nineteenth Amendment to the movement launched in the 1960s, including differing perspectives on the roles of women.

11.11 Students analyze the major social problems and domestic policy issues in contemporary American society.

1. Discuss the reasons for the nation's changing immigration policy, with emphasis on how the Immigration Act of 1965 and successor acts have transformed American society.

2. Discuss the significant domestic policy speeches of Truman, Eisenhower, Kennedy, Johnson, Nixon, Carter, Reagan, Bush, and Clinton (e.g., with regard to education, civil rights, economic policy, environmental policy).

3. Describe the changing roles of women in society as reflected in the entry of more women into the labor force and the changing family structure.

4. Explain the constitutional crisis originating from the Watergate scandal.

5. Trace the impact of, need for, and controversies associated with environmental conservation, expansion of the national park system, and the development of environmental protection laws, with particular attention to the interaction between environmental protection advocates and property rights advocates.

6. Analyze the persistence of poverty and how different analyses of this issue influence welfare reform, health insurance reform, and other social policies.

7. Explain how the federal, state, and local governments have responded to demographic and social changes such as population shifts to the suburbs, racial concentrations in the cities, Frostbelt-to-Sunbelt migration, international migration, decline of family farms, increases in out-of-wedlock births, and drug abuse.

Grade 12: Principles of American Democracy and Economics

Students in grade twelve will pursue a deeper understanding of the institutions of American government. They will compare systems of government in the world today and analyze the history and changing interpretations of the Constitution, the Bill of Rights, and the current state of the legislative, executive, and judiciary branches of government. An emphasis will be placed on analyzing the relationship among federal, state, and local governments, with particular attention paid to important historical documents such as the Federalist Papers. These standards represent the culmination of civic literacy as students prepare to vote, participate in community activities, and assume the responsibilities of citizenship.

In addition to studying government in grade twelve, students will also master fundamental economic concepts,
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applying the tools (graphs, statistics, equations) from other subject areas to the understanding of operations and institutions of economic systems. These, studied in a historic context will demonstrate to the students the basic economic principles of micro- and macroeconomics, international economics, comparative economic systems, measurement, and methods.

Principles of American Democracy

12.1 Students explain the fundamental principles and moral values of American democracy as expressed in the U.S. Constitution and other essential documents of American democracy.
   1. Analyze the influence of ancient Greek, Roman, English, and leading European political thinkers such as John Locke, Charles-Louis Montesquieu, Niccolò Machiavelli, and William Blackstone on the development of American government.
   2. Discuss the character of American democracy and its promise and perils as articulated by Alexis de Tocqueville.
   3. Explain how the U.S. Constitution reflects a balance between the classical republican concern with promotion of the public good and the classical liberal concern with protecting individual rights; and discuss how the basic premises of liberal constitutionalism and democracy are joined in the Declaration of Independence as "self-evident truths."
   4. Explain how the Founding Fathers' realistic view of human nature led directly to the establishment of a constitutional system that limited the power of the governors and the governed as articulated in the Federalist Papers.
   5. Describe the systems of separated and shared powers, the role of organized interests (Federalist Paper Number 10), checks and balances (Federalist Paper Number 51), the importance of an independent judiciary (Federalist Paper Number 78), enumerated powers, rule of law, federalism, and civilian control of the military.
   6. Understand that the Bill of Rights limits the powers of the federal government and state governments.

12.2 Students evaluate and take and defend positions on the scope and limits of rights and obligations as democratic citizens, the relationships among them, and how they are secured.
   1. Discuss the meaning and importance of each of the rights guaranteed under the Bill of Rights and how each is secured (e.g., freedom of religion, speech, press, assembly, petition, privacy).
   2. Explain how economic rights are secured and their importance to the individual and to society (e.g., the right to acquire, use, transfer, and dispose of property; right to choose one's work; right to join or not join labor unions; copyright and patent).
   3. Discuss the individual's legal obligations to obey the law, serve as a juror, and pay taxes.
   4. Understand the obligations of civic-mindedness, including voting, being informed on civic issues, volunteering and performing public service, and serving in the military or alternative service.
   5. Describe the reciprocity between rights and obligations; that is, why enjoyment of one's rights entails respect for the rights of others.
   6. Explain how one becomes a citizen of the United States, including the process of naturalization (e.g., literacy, language, and other requirements).

12.3 Students evaluate and take and defend positions on what the fundamental values and principles of civil society are (i.e., the autonomous sphere of voluntary personal, social, and economic relations that are not part of government), their interdependence, and the meaning and importance of those values and principles for a free society.
   1. Explain how civil society provides opportunities for individuals to associate for social, cultural, religious, economic, and political purposes
   2. Explain how civil society makes it possible for people, individually or in association with others, to bring their influence to bear on government in ways other than voting and elections.
   3. Discuss the historical role of religion and religious diversity.
   4. Compare the relationship of government and civil society in constitutional democracies to the relationship of government and civil society in authoritarian and totalitarian regimes.

12.4 Students analyze the unique roles and responsibilities of the three branches of government as established by the U.S. Constitution.
   1. Discuss Article I of the Constitution as it relates to the legislative branch, including eligibility for office and lengths of terms of representatives and senators; election to office; the roles of the House and Senate in impeachment proceedings; the role of the vice president; the enumerated legislative powers; and the process by which a bill becomes a law.
   2. Explain the process through which the Constitution can be amended.
   3. Identify their current representatives in the legislative branch of the national government.
4. Discuss Article II of the Constitution as it relates to the executive branch, including eligibility for office and length of term, election to and removal from office, the oath of office, and the enumerated executive powers.
5. Discuss Article III of the Constitution as it relates to judicial power, including the length of terms of judges and the jurisdiction of the Supreme Court.
6. Explain the processes of selection and confirmation of Supreme Court justices.

12.5 Students summarize landmark U.S. Supreme Court interpretations of the Constitution and its amendments.
1. Understand the changing interpretations of the Bill of Rights over time, including interpretations of the basic freedoms (religion, speech, press, petition, and assembly) articulated in the First Amendment and the due process and equal-protection-of-the-law clauses of the Fourteenth Amendment.
2. Analyze judicial activism and judicial restraint and the effects of each policy over the decades (e.g., the Warren and Rehnquist courts).
3. Evaluate the effects of the Court's interpretations of the Constitution in Marbury v. Madison, McCulloch v. Maryland, and United States v. Nixon, with emphasis on the arguments espoused by each side in these cases.

12.6 Students evaluate issues regarding campaigns for national, state, and local elective offices.
1. Analyze the origin, development, and role of political parties, noting those occasional periods in which there was only one major party or were more than two major parties.
2. Discuss the history of the nomination process for presidential candidates and the increasing importance of primaries in general elections.
3. Evaluate the roles of polls, campaign advertising, and the controversies over campaign funding.
4. Describe the means that citizens use to participate in the political process (e.g., voting, campaigning, lobbying, filing a legal challenge, demonstrating, petitioning, picketing, running for political office).
5. Discuss the features of direct democracy in numerous states (e.g., the process of referendums, recall elections).
6. Analyze trends in voter turnout; the causes and effects of reapportionment and redistricting, with special attention to spatial districting and the rights of minorities; and the function of the Electoral College.

12.7 Students analyze and compare the powers and procedures of the national, state, tribal, and local governments.
1. Explain how conflicts between levels of government and branches of government are resolved.
2. Identify the major responsibilities and sources of revenue for state and local governments.
3. Discuss reserved powers and concurrent powers of state governments.
4. Discuss the Ninth and Tenth Amendments and interpretations of the extent of the federal government's power.
5. Explain how public policy is formed, including the setting of the public agenda and implementation of it through regulations and executive orders.
6. Compare the processes of lawmaking at each of the three levels of government, including the role of lobbying and the media.
7. Identify the organization and jurisdiction of federal, state, and local (e.g., California) courts and the interrelationships among them.
8. Understand the scope of presidential power and decision-making through examination of case studies such as the Cuban Missile Crisis, passage of Great Society legislation, War Powers Act, Gulf War, and Bosnia.

12.8 Students evaluate and take and defend positions on the influence of the media on American political life.
- Discuss the meaning and importance of a free and responsible press.
- Describe the roles of broadcast, print, and electronic media, including the Internet, as means of communication in American politics.
- Explain how public officials use the media to communicate with the citizenry and to shape public opinion.

12.9 Students analyze the origins, characteristics, and development of different political systems across time, with emphasis on the quest for political democracy, its advances, and its obstacles.
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1. Explain how the different philosophies and structures of feudalism, mercantilism, socialism, fascism, communism, monarchies, parliamentary systems, and constitutional liberal democracies influence economic policies, social welfare policies, and human rights practices.

2. Compare the various ways in which power is distributed, shared, and limited in systems of shared powers and in parliamentary systems, including the influence and role of parliamentary leaders (e.g., William Gladstone, Margaret Thatcher).

3. Discuss the advantages and disadvantages of federal, confederal, and unitary systems of government.

4. Describe for at least two countries the consequences of conditions that gave rise to tyrannies during certain periods (e.g., Italy, Japan, Haiti, Nigeria, Cambodia).

5. Identify the forms of illegitimate power that twentieth-century African, Asian, and Latin American dictators used to gain and hold office and the conditions and interests that supported them.

6. Identify the ideologies, causes, stages, and outcomes of major Mexican, Central American, and South American revolutions in the nineteenth and twentieth centuries.

7. Describe the ideologies that give rise to Communism, methods of maintaining control, and the movements to overthrow such governments in Czechoslovakia, Hungary, and Poland, including the roles of individuals (e.g., Alexander Solzhenitsyn, Pope John Paul II, Lech Walesa, Vaclav Havel).

8. Identify the successes of relatively new democracies in Africa, Asia, and Latin America and the ideas, leaders, and general societal conditions that have launched and sustained, or failed to sustain, them.

12.10 Students formulate questions about and defend their analyses of tensions within our constitutional democracy and the importance of maintaining a balance between the following concepts: majority rule and individual rights; liberty and equality; state and national authority in a federal system; civil disobedience and the rule of law; freedom of the press and the right to a fair trial; the relationship of religion and government.

### Principles of Economics

12.1 Students understand common economic terms and concepts and economic reasoning.

1. Examine the causal relationship between scarcity and the need for choices.

2. Explain opportunity cost and marginal benefit and marginal cost.

3. Identify the difference between monetary and nonmonetary incentives and how changes in incentives cause changes in behavior.

4. Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources.

5. Analyze the role of a market economy in establishing and preserving political and personal liberty (e.g., through the works of Adam Smith).

12.2 Students analyze the elements of America’s market economy in a global setting.

1. Understand the relationship of the concept of incentives to the law of supply and the relationship of the concept of incentives and substitutes to the law of demand.

2. Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of particular products.

3. Explain the roles of property rights, competition, and profit in a market economy.

4. Explain how prices reflect the relative scarcity of goods and services and perform the allocative function in a market economy.

5. Understand the process by which competition among buyers and sellers determines a market price.

6. Describe the effect of price controls on buyers and sellers.

7. Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.

8. Explain the role of profit as the incentive to entrepreneurs in a market economy.

9. Describe the functions of the financial markets.

10. Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

12.3 Students analyze the influence of the federal government on the American economy.

1. Understand how the role of government in a market economy often includes paying for national defense, addressing environmental concerns, defining and enforcing property rights, attempting to make markets more competitive, and protecting consumers’ rights.

2. Identify the factors that may cause the costs of government actions to outstrip the benefits.

3. Describe the aims of government fiscal policies (taxation, borrowing, spending) and their influence on production, employment, and price levels.

4. Understand the aims and tools of monetary policy and their influence on economic activity (e.g., the Federal Reserve).
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12.4 Students analyze the elements of the U.S. labor market in a global setting.
1. Understand the operations of the labor market, including the circumstances surrounding the establishment of principal American labor unions, procedures that unions use to gain benefits for their members, the effects of unionization, the minimum wage, and unemployment insurance.
2. Describe the current economy and labor market, including the types of goods and services produced, the types of skills workers need, the effects of rapid technological change, and the impact of international competition.
3. Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.
4. Explain the effects of international mobility of capital and labor on the U.S. economy.

12.5 Students analyze the aggregate economic behavior of the U.S. economy.
1. Distinguish between nominal and real data.
2. Define, calculate, and explain the significance of an unemployment rate, the number of new jobs created monthly, an inflation or deflation rate, and a rate of economic growth.
3. Distinguish between short-term and long-term interest rates and explain their relative significance.

12.6 Students analyze issues of international trade and explain how the U.S. economy affects, and is affected by, economic forces beyond the United State's borders.
1. Identify the gains in consumption and production efficiency from trade, with emphasis on the main products and changing geographic patterns of twentieth-century trade among countries in the Western Hemisphere.
2. Compare the reasons for and the effects of trade restrictions during the Great Depression compared with present-day arguments among labor, business, and political leaders over the effects of free trade on the economic and social interests of various groups of Americans.
3. Understand the changing role of international political borders and territorial sovereignty in a global economy.
4. Explain foreign exchange, the manner in which exchange rates are determined, and the effects of the dollar's gaining (or losing) value relative to other currencies.

Science Standards, Grades 9 - 12

PHYSICS

Motion and Forces
1. Newton's laws predict the motion of most objects. As a basis for understanding this concept:
   a. Students know how to solve problems that involve constant speed and average speed.
   b. Students know that when forces are balanced, no acceleration occurs; thus an object continues to move at a constant speed or stays at rest (Newton's first law).
   c. Students know how to apply the law $F = ma$ to solve one-dimensional motion problems that involve constant forces (Newton's second law).
   d. Students know that when one object exerts a force on a second object, the second object always exerts a force of equal magnitude and in the opposite direction (Newton’s third law).
   e. Students know the relationship between the universal law of gravitation and the effect of gravity on an object at the surface of Earth.
   f. Students know applying a force to an object perpendicular to the direction of its motion causes the object to change direction but not speed (e.g., Earth’s gravitational force causes a satellite in a circular orbit to change direction but not speed).
   g. Students know circular motion requires the application of a constant force directed toward the center of the circle.
   h.* Students know Newton’s laws are not exact but provide very good approximations unless an object is moving close to the speed of light or is small enough that quantum effects are important.
   i.* Students know how to solve two-dimensional trajectory problems.
   j.* Students know how to resolve two-dimensional vectors into their components and calculate the magnitude and direction of a vector from its components.
   k.* Students know how to solve two-dimensional problems involving balanced forces (statistics).
   l.* Students know how to solve problems in circular motion by using the formula for centripetal acceleration in the following form: $a = \frac{v^2}{r}$
   m.* Students know how to solve problems involving the forces between two electric charges at a distance (Coulomb’s law) or the forces between two masses at a distance (universal gravitation).

Conservation of Energy and Momentum
2. The laws of conservation of energy and momentum provide a way to predict and describe the...
movement of objects. As a basis for understanding this concept:

a. Students know how to calculate kinetic energy by using the formula \( E = \frac{1}{2}mv^2 \)
b. Students know how to calculate changes in gravitational potential energy near Earth by using the formula (change in potential energy) = \( mgh \) (\( h \) is the change in the elevation).
c. Students know how to solve problems involving conservation of energy in simple systems, such as falling objects.
d. Students know how to calculate momentum as the product \( mv \).
e. Students know momentum is a separately conserved quantity different from energy.
f. Students know an unbalanced force on an object produces a change in its momentum.
g. Students know how to solve problems involving elastic and inelastic collisions in one dimension by using the principles of conservation of momentum and energy.
h.* Students know how to solve problems involving conservation of energy in simple systems with various sources of potential energy, such as capacitors and springs.

Heat and Thermodynamics

3. Energy cannot be created or destroyed, although in many processes energy is transferred to the environment as heat. As a basis for understanding this concept:

a. Students know heat flow and work are two forms of energy transfer between systems.
b. Students know that the work done by a heat engine that is working in a cycle is the difference between the heat flow into the engine at high temperature and the heat flow out at a lower temperature (first law of thermodynamics) and that this is an example of the law of conservation of energy.
c. Students know the internal energy of an object includes the energy of random motion of the object’s atoms and molecules, often referred to as thermal energy.

The greater the temperature of the object, the greater the energy of motion of the atoms and molecules that make up the object.
d. Students know that most processes tend to decrease the order of a system over time and that energy levels are eventually distributed uniformly.
e. Students know that entropy is a quantity that measures the order or disorder of a system and that this quantity is larger for a more disordered system.
f.* Students know the statement “Entropy tends to increase” is a law of statistical probability that governs all closed systems (second law of thermodynamics).
g.* Students know how to solve problems involving heat flow, work, and efficiency in a heat engine and know that all real engines lose some heat to their surroundings.

Waves

4. Waves have characteristic properties that do not depend on the type of wave. As a basis for understanding this concept:

a. Students know waves carry energy from one place to another.
b. Students know how to identify transverse and longitudinal waves in mechanical media, such as springs and ropes, and on the earth (seismic waves).
c. Students know how to solve problems involving wavelength, frequency, and wave speed.
d. Students know sound is a longitudinal wave whose speed depends on the properties of the medium in which it propagates.
e. Students know radio waves, light, and X-rays are different wavelength bands in the spectrum of electromagnetic waves whose speed in a vacuum is approximately \( 3 \times 10^8 \) m/s (186,000 miles/second).
f. Students know how to identify the characteristic properties of waves: interference (beats), diffraction, refraction, Doppler effect, and polarization.

Electric and Magnetic Phenomena

5. Electric and magnetic phenomena are related and have many practical applications.

a. Students know how to predict the voltage or current in simple direct current (DC) electric circuits constructed from batteries, wires, resistors, and capacitors.
b. Students know how to solve problems involving Ohm’s law.
c. Students know any resistive element in a DC circuit dissipates energy, which heats the resistor. Students can calculate the power (rate of energy dissipation) in any resistive circuit element by using the formula \( \text{Power} = IR \) (potential difference), \( I \) (current) = \( I^2R \)
d. Students know the properties of transistors and the role of transistors in electric circuits.
e. Students know charged particles are sources of electric fields and are subject to the forces of the electric fields from other charges.
f. Students know magnetic materials and electric currents (moving electric charges) are sources of magnetic fields and are subject to forces arising from the magnetic fields of other sources.
g. Students know how to determine the direction of a magnetic field produced by a current flowing in a...
straight wire or in a coil.

h. Students know changing magnetic fields produce electric fields, thereby inducing currents in nearby conductors.
i. Students know plasmas, the fourth state of matter, contain ions or free electrons or both and conduct electricity.
j. Students know electric and magnetic fields contain energy and act as vector force fields.
k. Students know the force on a charged particle in an electric field is \( qE \), where \( E \) is the electric field at the position of the particle and \( q \) is the charge of the particle.
l. Students know how to calculate the electric field resulting from a point charge.
m. Students know static electric fields have as their source some arrangement of electric charges.
n. Students know the magnitude of the force on a moving particle (with charge \( q \)) in a magnetic field is \( qvB \sin(a) \), where \( a \) is the angle between \( v \) and \( B \) (\( v \) and \( B \) are the magnitudes of vectors \( v \) and \( B \), respectively), and students use the right-hand rule to find the direction of this force.
o. Students know how to apply the concepts of electrical and gravitational potential energy to solve problems involving conservation of energy.

CHEMISTRY

Atomic and Molecular Structure
1. The periodic table displays the elements in increasing atomic number and shows how periodicity of the physical and chemical properties of the elements relates to atomic structure.
a. Students know how to relate the position of an element in the periodic table to its atomic number and atomic mass.
b. Students know how to use the periodic table to identify metals, semimetals, nonmetals, and halogens.
c. Students know how to use the periodic table to identify alkali metals, alkaline earth metals and transition metals, trends in ionization energy, electron negativity, and the relative sizes of ions and atoms.
d. Students know how to use the periodic table to determine the number of electrons available for bonding.
e. Students know the nucleus of the atom is much smaller than the atom yet contains most of its mass.
f. Students know how to use the periodic table to identify the lanthanide, actinide, and transactinide elements and know that the transuranium elements were synthesized and identified in laboratory experiments through the use of nuclear accelerators.
g. Students know how to relate the position of an element in the periodic table to its quantum electron configuration and to its reactivity with other elements in the table.
h. Students know the experimental basis for Thomson’s discovery of the electron, Rutherford’s nuclear atom, Millikan’s oil drop experiment, and Einstein’s explanation of the photoelectric effect.
i. Students know the experimental basis for the development of the quantum theory of atomic structure and the historical importance of the Bohr model of the atom.
j. Students know that spectral lines are the result of transitions of electrons between energy levels and that these lines correspond to photons with a frequency related to the energy spacing between levels by using Planck’s relationship \( E = hv \).

Chemical Bonds
2. Biological, chemical, and physical properties of matter result from the ability of atoms to form bonds from electrostatic forces between electrons and protons and between atoms and molecules.
a. Students know atoms combine to form molecules by sharing electrons to form covalent or metallic bonds or by exchanging electrons to form ionic bonds.
b. Students know chemical bonds between atoms in molecules such as \( \text{H}_2 \), \( \text{CH}_4 \), \( \text{NH}_3 \), \( \text{H}_2\text{CCH}_2 \), \( \text{N}_2 \), \( \text{Cl}_2 \), and many large biological molecules are covalent.
c. Students know salt crystals, such as \( \text{NaCl} \), are repeating patterns of positive and negative ions held together by electrostatic attraction.
d. Students know the atoms and molecules in liquids move in a random pattern relative to one another because the intermolecular forces are too weak to hold the atoms or molecules in a solid form.
e. Students know how to draw Lewis dot structures.
f. Students know how to predict the shape of simple molecules and their polarity from Lewis dot structures.
g. Students know how electronegativity and ionization energy relate to bond formation.
h. Students know how to identify solids and liquids held together by Van der Waals forces or hydrogen bonding and relate these forces to volatility and boiling/melting point temperatures.

Conservation of Matter and Stoichiometry
3. The conservation of atoms in chemical reactions leads to the principle of conservation of matter and the ability to calculate the mass of products and reactants.
CHEMISTRY

a. Students know how to describe chemical reactions by writing balanced equations.
b. Students know the quantity one mole is set by defining one mole of carbon 12 atoms to have a mass of exactly 12 grams.
c. Students know one mole equals 6.02 x 10^23 particles (atoms or molecules).
d. Students know how to determine the molar mass of a molecule from its chemical formula and a table of atomic masses and how to convert the mass of a molecular substance to moles, number of particles, or volume of gas at standard temperature and pressure.
e. Students know how to calculate the masses of reactants and products in a chemical reaction from the mass of one of the reactants or products and the relevant atomic masses.
f.* Students know how to calculate percent yield in a chemical reaction.
g.* Students know how to identify reactions that involve oxidation and reduction and how to balance oxidation-reduction reactions.

Gases and Their Properties
4. The kinetic molecular theory describes the motion of atoms and molecules and explains the properties of gases.
a. Students know the random motion of molecules and their collisions with a surface create the observable pressure on that surface.
b. Students know the random motion of molecules explains the diffusion of gases.
c. Students know how to apply the gas laws to relations between the pressure, temperature, and volume of any amount of an ideal gas or any mixture of ideal gases.
d. Students know the values and meanings of standard temperature and pressure (STP).
e. Students know how to convert between the Celsius and Kelvin temperature scales.
f. Students know there is no temperature lower than 0 Kelvin.
g.* Students know the kinetic theory of gases relates the absolute temperature of a gas to the average kinetic energy of its molecules or atoms.
h.* Students know how to solve problems by using the ideal gas law in the form PV = nRT.
i.* Students know how to apply Dalton’s law of partial pressures to describe the composition of gases and Graham’s law to predict diffusion of gases.

Acids and Bases
5. Acids, bases, and salts are three classes of compounds that form ions in water solutions.
a. Students know the observable properties of acids, bases, and salt solutions.
b. Students know acids are hydrogen-ion-donating and bases are hydrogen-ion accepting substances.
c. Students know strong acids and bases fully dissociate and weak acids and bases partially dissociate.
d. Students know how to calculate the concentration of a solute in terms of grams per liter, molarity, parts per million, and percent composition.
e.* Students know the Arrhenius, Bronsted-Lowry, and Lewis acid–base definitions.
f.* Students know how to calculate pH from the hydrogen-ion concentration.
g.* Students know buffers stabilize pH in acid–base reactions.

Solutions
6. Solutions are homogenous mixtures of two or more substances.
a. Students know the definitions of solute and solvent.
b. Students know how to describe the dissolving process at the molecular level by using the concept of random molecular motion.
c. Students know temperature, pressure, and surface area affect the dissolving process.
d. Students know how to calculate the concentration of a solute in terms of grams per liter, molarity, parts per million, and percent composition.
e.* Students know the relationship between the molarity of a solute in a solution and the solution’s depressed freezing point or elevated boiling point.
f.* Students know how molecules in a solution are separated or purified by the methods of chromatography and distillation.

Chemical Thermodynamics
7. Energy is exchanged or transformed in all chemical reactions and physical changes of matter.
a. Students know how to describe temperature and heat flow in terms of the motion of molecules (or atoms).
b. Students know chemical processes can either release (exothermic) or absorb (endothermic) thermal energy.
c. Students know energy is released when a material condenses or freezes and is absorbed when a material evaporates or melts.
d. Students know how to solve problems involving heat flow and temperature changes, using known values of specific heat and latent heat of phase change.
### CHEMISTRY

#### Reaction Rates
8. Chemical reaction rates depend on factors that influence the frequency of collision of reactant molecules.
   a. **Students know** the rate of reaction is the decrease in concentration of reactants or the increase in concentration of products with time.
   b. **Students know** how reaction rates depend on such factors as concentration, temperature, and pressure.
   c. **Students know** the role a catalyst plays in increasing the reaction rate.
   d. **Students know** the definition and role of activation energy in a chemical reaction.

#### Chemical Equilibrium
9. Chemical equilibrium is a dynamic process at the molecular level.
   a. **Students know** how to use LeChatelier’s principle to predict the effect of changes in concentration, temperature, and pressure.
   b. **Students know** equilibrium is established when forward and reverse reaction rates are equal.
   c. **Students know** how to write and calculate an equilibrium constant expression for a reaction.

#### Organic Chemistry and Biochemistry
10. The bonding characteristics of carbon allow the formation of many different organic molecules of varied sizes, shapes, and chemical properties and provide the biochemical basis of life.
    a. **Students know** large molecules (polymers), such as proteins, nucleic acids, and starch, are formed by repetitive combinations of simple subunits.
    b. **Students know** the bonding characteristics of carbon that result in the formation of a large variety of structures ranging from simple hydrocarbons to complex polymers and biological molecules.
    c. **Students know** amino acids are the building blocks of proteins.
    d. **Students know** the system for naming the ten simplest linear hydrocarbons and isomers that contain single bonds, simple hydrocarbons with double and triple bonds, and simple molecules that contain a benzene ring.
    e. **Students know** how to identify the functional groups that form the basis of alcohols, ketones, ethers, amines, esters, aldehydes, and organic acids.
    f. **Students know** the R-group structure of amino acids and know how they combine to form the polypeptide backbone structure of proteins.

#### Nuclear Processes
11. Nuclear processes are those in which an atomic nucleus changes, including radioactive decay of naturally occurring and human-made isotopes, nuclear fission, and nuclear fusion.
    a. **Students know** protons and neutrons in the nucleus are held together by nuclear forces that overcome the electromagnetic repulsion between the protons.
    b. **Students know** the energy release per gram of material is much larger in nuclear fusion or fission reactions than in chemical reactions. The change in mass (calculated by $E = mc^2$) is small but significant in nuclear reactions.
    c. **Students know** some naturally occurring isotopes of elements are radioactive, as are isotopes formed in nuclear reactions.
    d. **Students know** the three most common forms of radioactive decay (alpha, beta, and gamma) and know how the nucleus changes in each type of decay.
    e. **Students know** alpha, beta, and gamma radiation produce different amounts and kinds of damage in matter and have different penetrations.
    f. **Students know** how to calculate the amount of a radioactive substance remaining after an integral number of half lives have passed.
    g. **Students know** protons and neutrons have substructures and consist of particles called quarks.

### BIOLOGY/LIFE SCIENCES

#### Cell Biology
1. The fundamental life processes of plants and animals depend on a variety of chemical reactions that occur in specialized areas of the organism’s cells.
   a. **Students know** cells are enclosed within semi permeable membranes that regulate their interaction with their surroundings.
   b. **Students know** enzymes are proteins that catalyze biochemical reactions without altering the reaction
equilibrium and the activities of enzymes depend on the temperature, ionic conditions, and the pH of the surroundings.

c. Students know how prokaryotic cells, eukaryotic cells (including those from plants and animals), and viruses differ in complexity and general structure.

d. Students know the central dogma of molecular biology outlines the flow of information from transcription of ribonucleic acid (RNA) in the nucleus to translation of proteins on ribosomes in the cytoplasm.

e. Students know the role of the endoplasmic reticulum and Golgi apparatus in the secretion of proteins.

f. Students know usable energy is captured from sunlight by chloroplasts and is stored through the synthesis of sugar from carbon dioxide.

g. Students know the role of the mitochondria in making stored chemical-bond energy available to cells by completing the breakdown of glucose to carbon dioxide.

h. Students know most macromolecules (polysaccharides, nucleic acids, proteins, lipids) in cells and organisms are synthesized from a small collection of simple precursors.

i. Students know how chemiosmotic gradients in the mitochondria and chloroplast store energy for ATP production.

j. Students know how eukaryotic cells are given shape and internal organization by a cytoskeleton or cell wall or both.

### Genetics

#### 2. Mutation and sexual reproduction lead to genetic variation in a population.

a. Students know meiosis is an early step in sexual reproduction in which the pairs of chromosomes separate and segregate randomly during cell division to produce gametes containing one chromosome of each type.

b. Students know only certain cells in a multicellular organism undergo meiosis.

c. Students know how random chromosome segregation explains the probability that a particular allele will be in a gamete.

d. Students know new combinations of alleles may be generated in a zygote through the fusion of male and female gametes (fertilization).

e. Students know why approximately half of an individual’s DNA sequence comes from each parent.

f. Students know the role of chromosomes in determining an individual's sex.

g. Students know how to predict possible combinations of alleles in a zygote from the genetic makeup of the parents.

#### 3. A multicellular organism develops from a single zygote, and its phenotype depends on its genotype, which is established at fertilization.

a. Students know how to predict the probable outcome of phenotypes in a genetic cross from the genotypes of the parents and mode of inheritance (autosomal or X-linked, dominant or recessive).

b. Students know the genetic basis for Mendel’s laws of segregation and independent assortment.

c. Students know how to predict the probable mode of inheritance from a pedigree diagram showing phenotypes.

d. Students know how to use data on frequency of recombination at meiosis to estimate genetic distances between loci and to interpret genetic maps of chromosomes.

#### 4. Genes are a set of instructions encoded in the DNA sequence of each organism that specify the sequence of amino acids in proteins characteristic of that organism.

a. Students know the general pathway by which ribosomes synthesize proteins, using tRNAs to translate genetic information in mRNA.

b. Students know how to apply the genetic coding rules to predict the sequence of amino acids from a sequence of codons in RNA.

c. Students know how mutations in the DNA sequence of a gene may or may not affect the expression of the gene or the sequence of amino acids in an encoded protein.

d. Students know specialization of cells in multicellular organisms is usually due to different patterns of gene expression rather than to differences of the genes themselves.

e. Students know proteins can differ from one another in the number and sequence of amino acids.

f. Students know why proteins having different amino acid sequences typically have different shapes and chemical properties.

#### 5. The genetic composition of cells can be altered by incorporation of exogenous DNA into the cells.

a. Students know the general structures and functions of DNA, RNA, and protein.

b. Students know how to apply base-pairing rules to explain precise copying of DNA during semiconservative
replication and transcription of information from DNA into mRNA.

c. *Students know* how genetic engineering (biotechnology) is used to produce novel biomedical and agricultural products.

d. *Students know* how basic DNA technology (restriction digestion by endonucleases, gel electrophoresis, ligation, and transformation) is used to construct recombinant DNA molecules.

e. *Students know* how exogenous DNA can be inserted into bacterial cells to alter their genetic makeup and support expression of new protein products.

**Ecology**

6. **Stability in an ecosystem is a balance between competing effects.**

a. *Students know* biodiversity is the sum total of different kinds of organisms and is affected by alterations of habitats.

b. *Students know* how to analyze changes in an ecosystem resulting from changes in climate, human activity, introduction of nonnative species, or changes in population size.

c. *Students know* how fluctuations in population size in an ecosystem are determined by the relative rates of birth, immigration, emigration, and death.

d. *Students know* how water, carbon, and nitrogen cycle between abiotic resources and organic matter in the ecosystem and how oxygen cycles through photosynthesis and respiration.

e. *Students know* a vital part of an ecosystem is the stability of its producers and decomposers.

f. *Students know* at each link in a food web some energy is stored in newly made structures but much energy is dissipated into the environment as heat. This dissipation may be represented in an energy pyramid.

g. *Students know* how to distinguish between the accommodation of an individual organism to its environment and the gradual adaptation of a lineage of organisms through genetic change.

**Evolution**

7. **The frequency of an allele in a gene pool of a population depends on many factors and may be stable or unstable over time.**

a. *Students know* why natural selection acts on the phenotype rather than the genotype of an organism.

b. *Students know* why alleles that are lethal in a homozygous individual may be carried in a heterozygote and thus maintained in a gene pool.

c. *Students know* new mutations are constantly being generated in a gene pool.

d. *Students know* variation within a species increases the likelihood that at least some members of a species will survive under changed environmental conditions.

e. *Students know* the conditions for Hardy-Weinberg equilibrium in a population and why these conditions are not likely to appear in nature.

f. *Students know* how to solve the Hardy-Weinberg equation to predict the frequency of genotypes in a population, given the frequency of phenotypes.

8. **Evolution is the result of genetic changes that occur in constantly changing environments.**

a. *Students know* how natural selection determines the differential survival of groups of organisms.

b. *Students know* a great diversity of species increases the chance that at least some organisms survive major changes in the environment.

c. *Students know* the effects of genetic drift on the diversity of organisms in a population.

d. *Students know* reproductive or geographic isolation affects speciation.

e. *Students know* how to analyze fossil evidence with regard to biological diversity, episodic speciation, and mass extinction.

f. *Students know* how to use comparative embryology, DNA or protein sequence comparisons, and other independent sources of data to create a branching diagram (cladogram) that shows probable evolutionary relationships.

g. *Students know* how several independent molecular clocks, calibrated against each other and combined with evidence from the fossil record, can help to estimate how long ago various groups of organisms diverged evolutionarily from one another.

**Physiology**

9. **As a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable (homeostatic) despite changes in the outside environment.**

a. *Students know* how the complementary activity of major body systems provides cells with oxygen and nutrients and removes toxic waste products such as carbon dioxide.

b. *Students know* how the nervous system mediates communication between different parts of the body and
**BIOLOGY/LIFE SCIENCES**

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<td><strong>the body’s interactions with the environment.</strong></td>
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<td>c. <strong>Students know</strong> how feedback loops in the nervous and endocrine systems regulate conditions in the body.</td>
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<td>d. <strong>Students know</strong> the functions of the nervous system and the role of neurons in transmitting electrochemical impulses.</td>
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<tr>
<td>e. <strong>Students know</strong> the roles of sensory neurons, interneurons, and motor neurons in sensation, thought, and response.</td>
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<td>f.** Students know** the individual functions and sites of secretion of digestive enzymes (amylases, proteases, nuclease, lipases), stomach acid, and bile salts.</td>
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<td>g.** Students know** the homeostatic role of the kidneys in the removal of nitrogenous wastes and the role of the liver in blood detoxification and glucose balance.</td>
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<td>h.** Students know** the cellular and molecular basis of muscle contraction, including the roles of actin, myosin, Ca(^{2+}), and ATP.</td>
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<td>i.** Students know** how hormones (including digestive, reproductive, osmoregulatory) provide internal feedback mechanisms for homeostasis at the cellular level and in whole organisms.</td>
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**10. Organisms have a variety of mechanisms to combat disease.**

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<td>a. <strong>Students know</strong> the role of the skin in providing nonspecific defenses against infection.</td>
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<td>b. <strong>Students know</strong> the role of antibodies in the body’s response to infection.</td>
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<td>c. <strong>Students know</strong> how vaccination protects an individual from infectious diseases.</td>
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<td>d. <strong>Students know</strong> there are important differences between bacteria and viruses with respect to their requirements for growth and replication, the body’s primary defenses against bacterial and viral infections, and effective treatments of these infections.</td>
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<td>e. <strong>Students know</strong> why an individual with a compromised immune system (for example, a person with AIDS) may be unable to fight off and survive infections by microorganisms that are usually benign.</td>
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<td>f.** Students know** the roles of phagocytes, B-lymphocytes, and T-lymphocytes in the immune system.</td>
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**EARTH SCIENCES**

**Earth’s Place in the Universe**

1. **Astronomy and planetary exploration reveal the solar system’s structure, scale, and change over time. As a basis for understanding this concept:**

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<tr>
<td>a. <strong>Students know</strong> how the differences and similarities among the sun, the terrestrial planets, and the gas planets may have been established during the formation of the solar system.</td>
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<td>b. <strong>Students know</strong> the evidence from Earth and moon rocks indicates that the solar system was formed from a nebular cloud of dust and gas approximately 4.6 billion years ago.</td>
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<td>c. <strong>Students know</strong> the evidence from geological studies of Earth and other planets suggest that the early Earth was very different from Earth today.</td>
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<td>d. <strong>Students know</strong> the evidence indicating that the planets are much closer to Earth than the stars are.</td>
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<td>e. <strong>Students know</strong> the Sun is a typical star and is powered by nuclear reactions, primarily the fusion of hydrogen to form helium.</td>
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<td>f. <strong>Students know</strong> the evidence for the dramatic effects that asteroid impacts have had in shaping the surface of planets and their moons and in mass extinctions of life on Earth.</td>
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<td>g.** Students know** the evidence for the existence of planets orbiting other stars.</td>
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2. **Earth-based and space-based astronomy reveal the structure, scale, and changes in stars, galaxies, and the universe over time.**

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<tr>
<td>a. <strong>Students know</strong> the solar system is located in an outer edge of the disc-shaped Milky Way galaxy, which spans 100,000 light years.</td>
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<td>b. <strong>Students know</strong> galaxies are made of billions of stars and comprise most of the visible mass of the universe.</td>
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<td>c. <strong>Students know</strong> the evidence indicating that all elements with an atomic number greater than that of lithium have been formed by nuclear fusion in stars.</td>
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<td>d. <strong>Students know</strong> that stars differ in their life cycles and that visual, radio, and X-ray telescopes may be used to collect data that reveal those differences.</td>
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<td>e.** Students know** accelerators boost subatomic particles to energy levels that simulate conditions in the stars and in the early history of the universe before stars formed.</td>
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<tr>
<td>f.** Students know** the evidence indicating that the color, brightness, and evolution of a star are determined by</td>
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EARTH SCIENCES

a balance between gravitational collapse and nuclear fusion.
g. *Students know how the red-shift from distant galaxies and the cosmic background radiation provide evidence for the "big bang" model that suggests that the universe has been expanding for 10 to 20 billion years.

Dynamic Earth Processes
3. Plate tectonics operating over geologic time has changed the patterns of land, sea, and mountains on Earth’s surface. As the basis for understanding this concept:
   a. Students know features of the ocean floor (magnetic patterns, age, and sea-floor topography) provide evidence of plate tectonics.
   b. Students know the principal structures that form at the three different kinds of plate boundaries.
   c. Students know how to explain the properties of rocks based on the physical and chemical conditions in which they formed, including plate tectonic processes.
   d. Students know why and how earthquakes occur and the scales used to measure their intensity and magnitude.
   e. Students know there are two kinds of volcanoes: one kind with violent eruptions producing steep slopes and the other kind with voluminous lava flows producing gentle slopes.
   f. *Students know the explanation for the location and properties of volcanoes that are due to hot spots and the explanation for those that are due to subduction.

Energy in the Earth System
4. Energy enters the Earth system primarily as solar radiation and eventually escapes as heat. As a basis for understanding this concept:
   a. Students know the relative amount of incoming solar energy compared with Earth’s internal energy and the energy used by society.
   b. Students know the fate of incoming solar radiation in terms of reflection, absorption, and photosynthesis.
   c. Students know the different atmospheric gases that absorb the Earth’s thermal radiation and the mechanism and significance of the greenhouse effect.
   d. *Students know the differing greenhouse conditions on Earth, Mars, and Venus; the origins of those conditions; and the climatic consequences of each.

5. Heating of Earth’s surface and atmosphere by the sun drives convection within the atmosphere and oceans, producing winds and ocean currents. As a basis for understanding this concept:
   a. Students know how differential heating of Earth results in circulation patterns in the atmosphere and oceans that globally distribute the heat.
   b. Students know the relationship between the rotation of Earth and the circular motions of ocean currents and air in pressure centers.
   c. Students know the origin and effects of temperature inversions.
   d. Students know properties of ocean water, such as temperature and salinity, can be used to explain the layered structure of the oceans, the generation of horizontal and vertical ocean currents, and the geographic distribution of marine organisms.
   e. Students know rain forests and deserts on Earth are distributed in bands at specific latitudes.
   f. *Students know the interaction of wind patterns, ocean currents, and mountain ranges results in the global pattern of latitudinal bands of rain forests and deserts.
   g. *Students know features of the ENSO (El Niño southern oscillation) cycle in terms of sea-surface and air temperature variations across the Pacific and some climatic results of this cycle.

6. Climate is the long-term average of a region’s weather and depends on many factors. As a basis for understanding this concept:
   a. Students know weather (in the short run) and climate (in the long run) involve the transfer of energy into and out of the atmosphere.
   b. Students know the effects on climate of latitude, elevation, topography, and proximity to large bodies of water and cold or warm ocean currents.
   c. Students know how Earth’s climate has changed over time, corresponding to changes in Earth’s geography, atmospheric composition, and other factors, such as solar radiation and plate movement.
   d. *Students know how computer models are used to predict the effects of the increase in greenhouse gases on climate for the planet as a whole and for specific regions.

Biogeochemical Cycles
EARTH SCIENCES

7. Each element on Earth moves among reservoirs, which exist in the solid earth, in oceans, in the atmosphere, and within and among organisms as part of biogeochemical cycles. As a basis for understanding this concept:
   a. Students know the carbon cycle of photosynthesis and respiration and the nitrogen cycle.
   b. Students know the global carbon cycle: the different physical and chemical forms of carbon in the atmosphere, oceans, biomass, fossil fuels, and the movement of carbon among these reservoirs.
   c. Students know the movement of matter among reservoirs is driven by Earth’s internal and external sources of energy.
   d.* Students know the relative residence times and flow characteristics of carbon in and out of its different reservoirs.

Structure and Composition of the Atmosphere

8. Life has changed Earth’s atmosphere, and changes in the atmosphere affect conditions for life. As a basis for understanding this concept:
   a. Students know the thermal structure and chemical composition of the atmosphere.
   b. Students know how the composition of Earth’s atmosphere has evolved over geologic time and know the effect of outgassing, the variations of carbon dioxide concentration, and the origin of atmospheric oxygen.
   c. Students know the location of the ozone layer in the upper atmosphere, its role in absorbing ultraviolet radiation, and the way in which this layer varies both naturally and in response to human activities.

California Geology

9. The geology of California underlies the state’s wealth of natural resources as well as its natural hazards. As a basis for understanding this concept:
   a. Students know the resources of major economic importance in California and their relation to California’s geology.
   b. Students know the principal natural hazards in different California regions and the geologic basis of those hazards.
   c. Students know the importance of water to society, the origins of California’s fresh water, and the relationship between supply and need.
   d.* Students know how to analyze published geologic hazard maps of California and know how to use the map’s information to identify evidence of geologic events of the past and predict geologic changes in the future.

INVESTIGATIONS AND EXPERIMENTATION

1. Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
   a. Select and use appropriate tools and technology (such as computer-linked probes, spreadsheets, and graphing calculators) to perform tests, collect data, analyze relationships, and display data.
   b. Identify and communicate sources of unavoidable experimental error.
   c. Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.
   d. Formulate explanations by using logic and evidence.
   e. Solve scientific problems by using quadratic equations and simple trigonometric, exponential, and logarithmic functions.
   f. Distinguish between hypothesis and theory as scientific terms.
   g. Recognize the usefulness and limitations of models and theories as scientific representations of reality.
   h. Read and interpret topographic and geologic maps.
   i. Analyze the locations, sequences, or time intervals that are characteristic of natural phenomena (e.g., relative ages of rocks, locations of planets over time, and succession of species in an ecosystem).
   j. Recognize the issues of statistical variability and the need for controlled tests.
   k. Recognize the cumulative nature of scientific evidence.
   l. Analyze situations and solve problems that require combining and applying concepts from more than one area of science.
   m. Investigate a science-based societal issue by researching the literature, analyzing data, and communicating the findings. Examples of issues include irradiation of food, cloning of animals by somatic cell
n. Know that when an observation does not agree with an accepted scientific theory, the observation is sometimes mistaken or fraudulent (e.g., the Piltdown Man fossil or unidentified flying objects) and that the theory is sometimes wrong.
HEALTH EDUCATION, Grades 9-12

UNIFYING CONCEPT: ACCEPTANCE OF PERSONAL RESPONSIBILITY FOR LIFELONG HEALTH

Expectation 1:
Students will demonstrate ways in which they can enhance and maintain their health and well-being.

**The Human Body**
- Practice good personal hygiene. Use protective equipment, such as wearing a helmet when cycling, or practice behaviors to protect the body, such as avoiding exposure to excessive noises.
- Recognize and accept differences in body types and maturation levels.
- Respond appropriately to the physical development of older adolescents in ways that promote physical health through such preventive measures as healthy food choices and exercise.

**Food Choices**
- Make healthy food choices in a variety of settings.
- Establish and maintain healthy eating practices. Select appropriate practices to maintain, lose, or gain weight based on scientific research.
- Recognize the need for updating one’s personal nutrition plan as individual needs or activities change.
- Analyze influences on food choices.

**Physical Activity**
- Observe safety rules during physical activities.
- Participate regularly in a variety of enjoyable physical activities.
- Analyze personal motivators related to pursuing physical activity.
- Explore ways to continue regular exercise practices when schedules change, such as during travel or while working.
- Explore ways to engage in out-of-school activities that promote fitness and health.
- Follow through with a personal fitness plan based on fitness goals and the results of periodic self-assessment.
- Make adjustments needed for successful implementation of a personal fitness plan.

**Mental and Emotional Health**
- Demonstrate characteristics that contribute to self-confidence and self-esteem.
- Develop and use effective communication skills.
- Develop and use effective coping strategies.
- Avoid self-destructive behaviors and practice strategies for resisting negative peer pressure.
- Relate in positive ways to peers and adults in and out of school.
- Identify risk factors for negative behaviors and develop effective strategies for counteracting these risk factors.
- Develop protective factors that help foster resiliency.
- Select entertainment that promotes mental and physical health.
- Identify personal habits influencing mental and emotional health and develop strategies for changing behaviors as needed to promote positive mental and emotional health.

Expectation 2:
Students will understand and demonstrate behaviors that prevent disease and speed recovery from illness.

**Disease Prevention**
- Practice positive health behaviors to reduce the risk of disease.
- Cooperate in regular health screenings.
- Practice and use effective self-examination procedures.
- Analyze personal behaviors in relation to health, well-being, and personal goals.
- Practice good personal hygiene.
Recognize the importance of prenatal and perinatal care.
Demonstrate care and concern toward ill persons in the family, the school, and the community.
Make a commitment to abstain from sexual activity.
Receive and understand statistics based on the latest medical information citing the failure and success rates of condoms in preventing AIDS and other sexually transmitted diseases.

Treatment of Disease
Recognize symptoms of common illnesses.
Take prescription and over-the-counter medicines properly. Interpret correctly instructions written on medicine container labels, including information about side effects.
Determine when treatment of illness at home is appropriate and when and how to seek further help when needed. Accept responsibility for active involvement in the treatment or management of disease.
Interpret correctly information provided by health-care providers regarding tests or procedures.
Analyze one’s patterns related to treatment of disease to determine their effectiveness.

Expectation 3:
Students will practice behaviors that reduce the risk of becoming involved in potentially dangerous situations and react to potentially dangerous situations in ways that help to protect their health.

Potentially Dangerous Situations
Develop and use skills to identify, avoid, and cope with potentially dangerous situations.
Use skills to avoid, resolve, and cope with conflicts.
Understand and follow rules prohibiting possession of weapons at school.
Identify factors that reduce risks of accidents.
Recognize that the use of alcohol, tobacco, and other drugs plays a role in many dangerous situations.
Use thinking and decision-making skills in high-risk situations involving motor vehicles and other safety hazards.
Practice safe behavior in or near motorized vehicles, including observing basic traffic safety rules when driving, developing proficiency in handling a vehicle in difficult situations, wearing a seat belt, and ensuring that others wear seat belts.
Carry appropriate emergency equipment and use latex gloves when assisting individuals who are injured. Practice safe behavior in recreational activities, even in the absence of adults.
Practice safe behavior in and near water.
Report or obtain assistance when faced with unsafe situations.
Identify environmental factors that affect health and safety.
Demonstrate how peers can help each other avoid and cope with potentially dangerous situations in healthy ways.

Alcohol, Tobacco, and Other Drugs
Exercise self-control.
Develop and use interpersonal and communication skills such as assertiveness, refusal, negotiation, and conflict resolution.
Avoid, recognize, and respond to negative social influences and pressure to use alcohol, tobacco, or other drugs.
Use positive peer pressure to help counteract the negative effects of living in an environment where alcohol, tobacco, or other drug abuse or dependency exists.
Identify ways of obtaining help to resist pressure to use alcohol, tobacco, or other drugs.
Distinguish between helpful and harmful substances.
Differentiate between the use and misuse of prescription and nonprescription drugs.
Identify and participate in positive alternative activities, such as alcohol-, tobacco-, and drug-free events.
Help to develop and support the school’s no-use policy and work to support it.
CHILD ABUSE, Including Sexual Exploitation (Penal Code 11166[a])

- Identify ways to seek assistance if worried, abused, or threatened.
- Avoid, recognize, and respond to negative social influences and pressure to become sexually active, including applying refusal skills when appropriate.
- Recognize and avoid situations that can increase risk of abuse. Develop and use assertiveness skills and learn self-defense techniques.

Emergencies

- Recognize emergencies and respond appropriately.
- Develop and maintain with other family members a personal and family emergency plan and emergency supplies at home and in vehicles. Identify appropriate use of local emergency services.
- Use latex gloves when assisting persons who are injured.

UNIFYING CONCEPT: RESPECT FOR AND PROMOTION OF HEALTH OF OTHERS

Expectation 4:
Students will understand and demonstrate how to play a positive, active role in promoting the health of their families.

Roles of Family Members

- Develop and use effective communication skills.
- Seek assistance if living in a family where abuse of alcohol or other drugs exists (e.g., participating in a support group for teens who are the children of alcoholics).
- Support and value all family members.
- Demonstrate ways to help support positive family interactions.
- Practice health-promoting behaviors within the family.
- Complete self-initiated activities beyond assigned chores to help support the family.
- Identify safety hazards in the home and help to remove them.

Change Within the Family

- Use effective strategies to cope with change within the family.
- Develop a plan to facilitate transition from the role of a child to the role of an independent adult.
- Discuss with parents plans to continue education beyond high school and develop a mutual understanding of how this will affect family roles and interactions.

Expectation 5:
Students will understand and demonstrate how to promote positive health practices within the school and community, including how to cultivate positive relationships with their peers.

Friendship and Peer Relationships

- Know and use appropriate ways to make new friends.
- Demonstrate positive actions toward others.
- Resolve conflicts in a positive, constructive way.
- Interact effectively with many different people, including males and females and members of different ethnic and cultural groups.
- Analyze appropriate behaviors in a dating relationship.
- Demonstrate how to resist negative peer pressure.
- Avoid demeaning statements directed toward others.
- Promote positive health behaviors among peers.
- Participate in group activities as a means of getting to know other people.
- Respect the dignity of others.
- Respect marriage.

School and Community-Based Efforts to Promote and Protect Health

- Understand and follow school rules related to health.
HEALTH EDUCATION, Grades 9-12

- Participate in school efforts to promote health.
- Assume responsibility for helping to take care of the school.
- Participate in community efforts to address local health and environmental issues.
- Encourage others to become involved in health-promotion efforts at school.
- Analyze the impact of laws, policies, and practices on health-related issues.
- Encourage others to become involved in health-promotion efforts at many different levels.
- Access appropriately services available within the community.
- Initiate and involve others in health-promotion efforts at school or in the community.

UNIFYING CONCEPT: UNDERSTANDING THE PROCESS OF GROWTH AND DEVELOPMENT

Expectation 6:
Students will understand the variety of physical, mental, emotional, and social changes that occur throughout life.

Life Cycle
- Practice behaviors that will provide the option of healthy parenting later in life, such as avoidance of substance abuse.
- Recognize and be prepared to adapt to the changes that occur during life, such as changes associated with young adulthood, pregnancy, middle age, or old age.
- Develop and use effective communication skills to discuss with parents or other trusted adults the changes that occur during adolescence.
- Recognize and acknowledge that different people progress through different stages of the life cycle at different rates.
- Express support and compassion for others who are grieving.
- Recognize and discuss with parents and other trusted adults questions regarding death and dying.
- Review family histories and determine whether a genetic disorder exists in the family.

Expectation 7:
Students will understand and accept individual differences in growth and development.

Growth and Development
- Demonstrate an understanding of individual differences.
- Develop a realistic body image. Recognize problems associated with not having a realistic body image.
- Recognize the effects of performance-altering substances and avoid the use of those substances.
- Adapt group activities to include a variety of students.
- Promote acceptance of a range of body types and abilities.
- Use scientific data as a basis for individual nutrition and fitness plans.

Mental and Emotional Development
- Identify, express, and manage feelings appropriately.
- Develop and use effective communication skills.
- Recognize one’s own strengths and limitations.
- Use coping strategies, including time-management skills.
- Develop a focus on the future.

Expectation 8:
Students will understand their developing sexuality, will choose to abstain from sexual activity, will learn about protecting their sexual health, and will treat the sexuality of others with respect.

Sexuality
- Use good judgment to recognize and avoid situations that could lead to subsequent sexual activity.
- Avoid, recognize, and respond to negative social influences and pressure to become sexually active.
- Demonstrate assertiveness and refusal skills and apply those skills to situations involving pressure to be sexually active.
- Practice behaviors that support the decision to abstain from sexual activity.
HEALTH EDUCATION, Grades 9-12

- Analyze messages about sexuality from society, including the media, and identify how those messages affect behavior.
- Develop and use effective communication skills, including the ability to discuss with parents questions on sexuality. Identify appropriate ways to show affection.
- Identify ways to seek assistance if abused.
- Evaluate what students can do to counteract the false norms portrayed in the media.
- Receive and understand statistics based on the latest medical information citing the failure and success rates of condoms and other contraceptives in preventing pregnancy and sexually transmitted diseases.
- helpful products and services. Seek care from the school nurse or school-linked services when appropriate. Identify appropriate sources of health services for a variety of illnesses. Develop and use strategies for identifying and combating fraudulent or misleading health products, services, and information.
- Use critical-thinking skills to analyze marketing and advertising techniques and their influence on food selection.

Expectation 9:
Students will identify information, products, and services that may be helpful or harmful to their health.

Products and Services/Food Choices
- Identify a variety of consumer influences and analyze how those influences affect decisions.
- Use critical-thinking skills to analyze marketing and advertising techniques and their influence.
- Recognize Use valid nutrition information to make healthy food choices.
- Use critical-thinking skills to distinguish facts from fallacies concerning the nutritional value of foods and food supplements.
- Use critical-thinking skills to analyze weight modification practices and select appropriate practices to maintain, lose, or gain weight according to individual need and scientific research.
- Use labels to compare the contents of food products.
- Use unit pricing to determine the most economical purchases.
- Use effective consumer skills to purchase healthy foods.
- Adapt recipes to make them more healthy by lowering the amount of fat, salt, or sugar and increasing the amount of fiber.

Health Education
We believe that student mental, physical, and social health is a factor that contributes significantly to academic success. Our health education for high school students is designed to achieve the concepts and expectations set forth in the California Health Education Framework.

We will use the textbook Lifetime Health, published by Holt, Rinehart and Winston that promotes wellness and health literacy, encouraging positive behavior now to ensure a lifetime of health. Lessons cover important subjects and allow us to tailor the program to our curriculum. Frequent assessment ensures students understand lessons that can affect the rest of their lives. Lifetime Health meets all National Health Education Standards focused on life skills for healthy life styles.

Life Skills help students learn skills to protect, enhance, and maintain their health, with an emphasis on decision-making and refusal skills including: making good decisions; using refusal skills; assessing personal health; evaluating media messages; communicating effectively; setting goals; being a wise consumer; practicing wellness; coping; and using community resources.

Our curriculum is designed to help students make healthy decisions through built-in reading and writing support to help students understand what they read, then help them explore how the lessons impact their lives.
California Standards Alignment
All MSCP courses have been designed in alignment with the California State Standards. MSCP courses have also been designed to meet the UC A-G requirements, as shown here:

<table>
<thead>
<tr>
<th>COURSES</th>
<th>MSCP COURSE REQUIREMENTS (Years)</th>
<th>UC COURSE REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>4 Years</td>
</tr>
<tr>
<td>Language other than English</td>
<td>2</td>
<td>2 (3 Recommended)</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
<td>3 (4 Recommended)</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>3</td>
<td>2 (3 recommended)</td>
</tr>
<tr>
<td>History &amp; Social Science</td>
<td>3</td>
<td>2 Years</td>
</tr>
<tr>
<td>Visual &amp; Performing Arts</td>
<td>1</td>
<td>1 Year</td>
</tr>
<tr>
<td>Health Education</td>
<td>.5</td>
<td>.5 (1 semester)</td>
</tr>
<tr>
<td>Physical Education or Elective</td>
<td>1</td>
<td>4 semesters</td>
</tr>
<tr>
<td>Life Skills</td>
<td>.5</td>
<td>.5 (1 semester)</td>
</tr>
<tr>
<td>College Preparatory Electives</td>
<td>5 additional elective classes including College Prep Elective Courses (See Below Chart)</td>
<td>1 (2 semesters of one College Prep Elective Course)</td>
</tr>
</tbody>
</table>

All of the curricular standards for MSCP are directly aligned with the California State Curriculum Standards. Where necessary for college preparation, MSCP’s curricula exceed these standards. During our summer orientation, school leaders will supply incoming teachers with sample scope and sequences and internal standards and then guide teachers to critically analyze assessments from the CST along with all state and nationally recognized standards to identify the skills and content areas needed for mastery at a specific grade level. Teachers blend the CA standards with the identified skills and content into smaller, measurable goals to create learning targets. These standards drive the creation of quarter and semester-end assessments.

Core Subjects by Grade Level
* Indicates a semester course
** Indicates course that meets the College Prep Elective Requirement

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA</td>
<td>English 9</td>
<td>English 10 or English 10 Honors</td>
<td>English 11, English 11 Honors, or AP English Language</td>
<td>English 12 or AP English Language or English Literature</td>
</tr>
<tr>
<td>Math</td>
<td>Algebra 1 or Algebra II</td>
<td>Algebra II or Geometry</td>
<td>Geometry or Pre-Calculus</td>
<td>Pre-Calculus or AP Calculus</td>
</tr>
<tr>
<td>Social Studies</td>
<td>World History</td>
<td>US History or AP US History</td>
<td>US Government* and Economics* or AP Government* and Economics*</td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>Biology or Biology Honors</td>
<td>Anatomy and Physiology**</td>
<td>Chemistry</td>
<td>Environmental Science or AP Biology</td>
</tr>
<tr>
<td>Language other than English</td>
<td>Spanish 1</td>
<td>Spanish 2</td>
<td>Spanish 3 or AP Spanish Language</td>
<td>Spanish 4, AP Spanish Language, or AP Spanish Literature</td>
</tr>
<tr>
<td>Electives</td>
<td>P.E. and Math Support</td>
<td>CAHSEE Support</td>
<td>College Prep Math* and English College Prep English*</td>
<td></td>
</tr>
<tr>
<td>Visual and Performing Arts</td>
<td></td>
<td></td>
<td></td>
<td>Art</td>
</tr>
</tbody>
</table>
Research Supporting Instructional Program
The MSCP planning team has performed extensive research in designing the school’s instructional program. In addition to researching literature, as evidenced by the footnote citations throughout this document, team members visited several charter schools to learn about successful models that maximize student learning and teacher effectiveness.

These schools include several of the Alliance College-Ready Public Schools, several PUC schools, the Bright Star Schools, Camino Nuevo High School, New Millennium Secondary School, and the Design and Architecture Senior High School (DASH).

Textbooks
Language Arts
Timeless Voices, Timeless Themes Gold - Prentice Hall
Timeless Voices, Timeless Themes Platinum - Prentice Hall
The American Experience - Prentice Hall

Math
Algebra I - Prentice Hall
Algebra II - McDougal Littell
Geometry - McDougal Littell
Pre-Calculus - Houghton Mifflin
Single Variable Calculus - Houghton Mifflin

Science
Biology - Prentice Hall
Essentials of Human Anatomy and Physiology – Pearson, Benjamin, Cummings
Chemistry: Matter and Change - Glencoe
AP Biology - Pearson

Social Science
America: Pathways to the Present - Prentice Hall
American Pageant Houghton - Mifflin
Wilson American Government - Houghton
Economics: Principals and Practices - Glencoe

Textbooks were chosen based on the success of the curricular focus at Dr. Olga Mohan High School, the 2010 CCSA Charter School of the Year. Curriculum for intervention classes and other course offerings will be teacher created.

E. Learning Environment
MSCP will be a site-based matriculation learning environment in that all MSCP students will participate in their classes on the MSCP campus.

F. Strategies to Meet the Needs of All Learners
Additional Special Education Strategies
In addition to the special education compliance policies described above, MSCP will have further supports for special education students unique to the MSCP school model.

Staff Meeting Time for Discussing Individual Student Progress
Approximately one hour out of the 2-hour weekly professional development time on Early Dismissal days will be spent discussing individual student progress among teachers and advisors who share the same students. This meeting time will serve as a basis to update the Individual Learning Plans for all students and to highlight the strategies that have been successful with individual students, including special education students, versus those that have been less successful.
Supplemental Student Support Opportunities

Tutoring will be offered for students needing additional instructional support time beyond the bell. Tutoring will be available for at least 1 hour after the last class and on weekends, as needed. This time may be used by MSCP special education students to access teachers in subject matters they may need additional help in, as well as for computer-based intervention programs.

English Learners:

MSCP will use an inclusion model to serve English Learners and will ensure all of its teachers are trained in the most effective English Learner instructional strategies, including the research-based Specially Designed Academic Instruction in English (SADIE) and Sheltered English strategies. MSCP will also employ teachers with CLAD certification, and give preference to those with BCLAD certification. MSCP teachers will align their teaching to the California English Language Development standards and all staff members will be given the LAUSD ELD Handbook as a resource guide for curriculum planning. Best practices and individual student progress discussions will be frequent agenda items during the school’s weekly professional development and grade-level meetings. The results of these discussions and teacher input will be captured in the Individual Learning Plans for all students, including English Learners.

Services to English Learners begin with identification. When students enroll at MSCP, every effort will be made to obtain their cumulative record in order to identify their English Learner status. In the absence of a cumulative record MSCP will use the home language survey to determine whether English is a students’ home language. All students for whom MSCP has not obtained a cumulative record or whose English Learner status is unknown and whose home language is other than English (as indicated on their home language survey) will be given the California English Language Development Test (CELDT) during the testing window (currently July 1 to October 31) to determine their English language proficiency level. When appropriate, these students will also be assessed in their primary language to determine academic skill levels. MSCP will use annual CELDT and CST data, teacher observations, and optional parent input to identify English Learners (EL), determine their English Language Development (ELD) levels, and reclassify ELL students as English proficient when appropriate. MSCP will also monitor the progress of students reclassified as Redesignated as Fluent English Proficient (RFEP) to ensure that they maintain English proficiency, will retest any students who appear not to maintain proficiency, and may reclassify these students as ELs once again if indicated by the school’s criteria. EL student classification will use the California English Language Development Standards levels:

- Beginning
- Early Intermediate
- Intermediate
- Early Advanced
- Advanced

The CELDT exam will be administered annually to measure student progress.

The small school size and small class sizes at MSCP will provide an environment where English Learners will receive ample academic support and attention to their individual needs. English Learners can use the Student Support Class time at the end of each regular school day for additional English language acquisition reinforcement. This additional reinforcement will take place through teacher-facilitated language acquisition and literacy development instruction, as well as through individualized computer-based instruction. The MSCP team is in the process of researching the most effective interactive English Language Development software providers for English Learners at the high school level. Teachers will work with the school administrators in creating appropriate and individualized support curriculum once the students are assessed for a baseline.

MSCP recognizes that “technology-enhanced programs for English Learners work most effectively when they:

1. Provide interaction, communicative activities, and real audiences.
2. Utilize task-based and problem-solving activities.
3. Provide ‘sheltering techniques’ – ways to make lessons easier to understand – to support language and academic development.
4. Are student-centered and promote student autonomy.
5. Facilitate focused development of English-language skills.
7. Foster understanding and appreciation of the target and native cultures.
8. Provide appropriate feedback and assessment.16

MSCP advisors will communicate closely with the parents of EL students to share their children’s progress and to actively engage them in their children’s education. MSCP will seek staff members who are bilingual to assist with verbal translation needs. The effectiveness of the EL program will be measured by students improvement on performance assessments based on the State standards and reclassification of EL status.

**Students Achieving Substantially Above Grade Level:**
MSCP will meet the needs of those students achieving substantially above grade level in a number of ways. These students will be identified through both their prior year’s school records in terms of whether they were classified as GATE. Given prior year’s records are not always readily available on the first day of school, MSCP will also use its beginning of the year diagnostic exams that will be administered to all students as a measure of whether a student is achieving substantially above grade level.

In terms of specific strategies to meet the needs of these high-achieving students, MSCP will use several.

**Individualized Learning and Acceleration Opportunities**
First, these advanced students will have the opportunity for acceleration due to the individualized nature of the MSCP instructional program, including its differentiated instruction focus. Teachers will work with the school administrators in creating appropriate differentiation of the core curriculum once the students are assessed for a baseline. The differentiation will be at an appropriate level to challenge GATE students. This will be individualized based on each student’s data; including teacher created assessments, benchmarks, and standardized tests. There will also be Honors for AP class options.

**Early College Access**
Second, students achieving substantially above grade level will have the opportunity to take AP college preparatory courses and will be recommended to enroll in college level courses at the local community colleges.

**Mentoring and Leadership Roles**
Third, MSCP will provide opportunities for these higher-achieving students to mentor lower-achieving students and to be selected for academic leadership positions.

**Students Achieving Substantially Below Grade Level:**
In an effort to improve the performance for all students including those who have been identified as low achieving, or at risk of retention, MSCP will implement a strategy based on an Individualized Learning Plan (ILP). All students have such a plan. The following takes place for those specifically identified as low achieving:

1. Parents are informed of the student’s academic standing within one week of identification.
2. Within three weeks of identification, a conference is scheduled between the student, parent, teachers, and the administrative staff to develop an action plan. The action plan has specific responsibilities for the student, parent, and teachers.
3. The student receives supplemental support services. In the areas were the student is struggling most, one-to-one instruction is offered by the classroom teacher and/or assistant teacher.
4. The student is enrolled in a remediation program to accelerate learning. Paraprofessionals and/or trained tutors (recruited from the business community, the college/university community, and volunteer organizations) provide remedial tutoring through individualized and/or small group assistance.

MSCP staff will monitor student progress of those students substantially below grade level in the same

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16 Excerpted from Technology and Teaching English Language Learners, by Mary Ellen Butler-Pascoe and Karin M. Wiburg.
way it monitors student progress for all of the school’s students – captured in students individual learning plans (ILPs), which will be online and updated regularly. The ILPs will be reviewed regularly by students in advisory period, and will include key progress information, such as:

- standardized test scores;
- individual class assessment scores (formative and summative);
- specific academic interventions used or in process;
- student goals;
- teacher comments;

Parents will have access, as previously mentioned, to their children’s individual learning plans, which will serve as key tools to engage parents in focused conversations around their children’s progress and goals. Every student’s advisor will serve as the primary liaison for communication with that student’s parent for these discussions, bringing in specific content-area teachers as appropriate.

**Students of Low Socio-Economic Status:**
MSCP plans to perform targeted outreach to serve a student body where at least 95% of students qualify for free or reduced lunch. Strategies for meeting the needs of low socio-economic status students are the same as those for all students, in terms of infusing the instructional program with as much expert teaching, personalization and individualized instruction as possible.

In the event that students’ socioeconomic status prevents them from accessing recreational reading materials or technology at home, MSCP will encourage those students to remain on campus after-school to use the computers and to borrow books from the classroom libraries to take home. The MSCP parent outreach efforts will cater to parents who work multiple jobs and whose schedules are full.

**G. Special Education Program (LAUSD-Specific Language)**
All charter schools must adhere to all terms and conditions of the Chanda Smith Modified Consent Decree (“MCD”) and any other court orders and/or consent decrees imposed upon the LAUSD as they pertain to special education. Charter schools must ensure that no student otherwise eligible to enroll in their charter school will be denied enrollment due to a disability or to the charter school’s inability to provide necessary services. Policies and procedures are in place to ensure the recruitment, enrollment and retention of students with disabilities at charter schools.

Prior to Los Angeles Unified School District (“LAUSD” or “District”) Governing Board approval, [Charter School] will execute a Memorandum of Understanding (“MOU”) by and between LAUSD and [Charter School] regarding the provision and funding of special education services consistent with the requirements of the LAUSD Special Education Local Plan Area (“SELPA”) Local Plan for Special Education.

**SELPA Reorganization**
The Los Angeles Unified School District is approved to operate as a single-District SELPA under the provisions of Education Code § 56195.1(a) and intends to continue operating as a single-District SELPA as in the current structure but will now create two school sections (District-operated Programs and Charter-operated Programs) under the administration of one single Administrative Unit pursuant to a reorganization plan approved by the Board of Education on January 4, 2011 (149/10-11). The Charter-operated schools will not have a LEA status but will function in a similar role in that each charter school will be responsible for all special education issues including services, placement, due process, related services, special education classes, and special education supports. Charter schools may apply for membership in the Charter-operated Program section of the SELPA. These schools will receive support from a Special Education Director for the Charter-operated Programs.

**Modified Consent Decree Requirements (LAUSD Specific-Language)**
All charter schools chartered by LAUSD Board of Education are bound by and must adhere to the terms, conditions and requirements of the Chanda Smith Modified Consent Decree (“MCD”) and other court orders imposed upon District pertaining to special education. The MCD is a consent decree entered in a federal court class action lawsuit initially brought on behalf of students with disabilities in LAUSD. It is an agreement of the parties approved by the federal court and monitored by a court-appointed independent monitor. The MCD includes eighteen statically measureable outcomes and facilities obligations that the
District has to achieve to disengage from the MCD and federal court oversight. All charter schools are required to use the District’s Special Education Policies and Procedures Manual and Welligent, the District-wide web-based software system used for online Individualized Education Programs (“IEPs”) and tracking of related services provided to students during the course of their education.

As part of fulfilling the District’s obligations under the Modified Consent Decree, data requests from charter schools that are not connected to the District’s current Student Information Systems (“SIS”) are made on a regular basis. The requested data must be submitted in the Office of the Independent Monitor’s required format and are as follows:

# The Independent Charter School Suspension/Expulsion Report, due monthly throughout the school year.

# Paper SESAC Report and Welligent Student Listing Verification, due monthly throughout the school year.

# CBEDS, which is due at the end of October of Each School Year.

# All Students Enrolled December 1 of Each School Year, due at the end of December every school year.

# Graduation Status of 12th Grade Students Enrolled on December 1, due at the end of June every school year.

The District is currently in the process of developing an Integrated Student Information System (“ISIS”) as required by the MCD. Although most charter schools are not currently utilizing the District’s current SIS, the MCD requires all charter schools to implement the use of ISIS once it is developed.
H. Implementation Plan

MSCP plans to open in August 2012 to serve 145 9th grade students (approximately 25-30 students in each classroom) during its first year of operation. Its goal is to add a grade each year until it reaches full capacity of approximately 500 students by year 5 (120 students in each grade 9-12).

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>October</td>
<td>• Submit charter petition to LAUSD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue community outreach and build parent support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue facility search</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop collateral and build website</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Begin fundraising</td>
</tr>
<tr>
<td></td>
<td>November-March</td>
<td>• Begin outreach to local middle schools, both public and private</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hold community forums and visit local agencies for those in need</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue to recruit and hire Teacher Leaders/Master Teachers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue facility search</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue fundraising</td>
</tr>
<tr>
<td></td>
<td>April/May</td>
<td>• Charter petition will go before the LAUSD school board</td>
</tr>
<tr>
<td>2011-2012</td>
<td></td>
<td>• Actively reach out to potential students, targeting high-needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>populations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue recruiting Teacher Leaders/Master Teachers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue facility search, if facility has not yet been identified</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Board finalizes facility and contract</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Board of Directors approves contracts with outside providers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• All financial systems are established, including payroll, retirement,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and PO/payment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Apply for State Charter Start-Up funding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Continue student recruiting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Negotiate healthcare benefits for staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Apply for Start Up Revolving Loan through CCSA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hold lottery if applicable</td>
</tr>
<tr>
<td></td>
<td>June</td>
<td>• Continue student recruiting if needed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Apply for Start Up Revolving Loan through CCSA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Hire all teachers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Students begin enrolling and taking diagnostic tests</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Recruit and hire classified personnel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Implement building renovations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Obtain all necessary insurances</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Purchase textbooks, computers, software, furniture and equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Contract with food provider</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Keep parents informed of progress of the school</td>
</tr>
</tbody>
</table>

I. Teacher Recruitment

MSCP will actively recruit teachers who are reputed to be among the best in their fields, and who are experienced with similar demographics to the students who will be attending MSCP. Particularly in the first year of operation, it will be critical for MSCP to launch the school with an outstanding founding team to set the tone. Of all the outreach efforts, staff recruitment is the most crucial. MSCP must successfully attract those individuals who are capable of teaching, inspiring, and guiding students who have
traditionally been underserved. The strategies that MSCP will use to identify and recruit key staff will include, among others: professional networking, targeted outreach to local alumni of Teach for America, targeted outreach to Master’s degree candidates, a website for potential staff, and the use of EdJoin.

MSCP will only hire teaching candidates who are highly qualified and full credentialed, who possess subject matter competency and who fulfill all requirements outlined in No Child Left Behind (NCLB) regulations.

J. Professional Development

MSCP believes in self-directed lifelong learning. MSCP aspires to instill in those values in students and expects that commitment form staff. MSCP will offer a robust ongoing professional development program that will ensure that teachers have the skills to deliver the proposed instructional program.

Summer Training:
MSCP will hold a one-week mandatory summer training program for teachers at the start of each year. During this time, a heavy emphasis will be placed on:
- Building the school culture;
- Planning backwards (McTighe & Wiggins for curriculum mapping);\(^1\)
- Data-driven decision-making, including training on the school’s data management systems;
- Differentiated instruction, including strategies for meeting the needs of EL and special education students;
- Standards-based grading;
- Parent/Guardian engagement; and
- Advisory.

Weekly Professional Development Time:

MSCP will have Early Dismissal Days once a week in order to provide teachers with a 2-hour block of professional development and collaboration time. The specific topics addressed during the professional development and collaboration time will include reinforcement of those topics introduced during the Summer Training, as well as new topics that will be selected based on the specific and current needs of the staff, students and school community. The on-going professional development program will be heavily driven by data collected through 1) teacher self-assessments, 2) classroom observations and 3) disaggregated student test scores that identify not only the areas of core curriculum weakness, but also those student sub-groups that are in need of additional focus.

The weekly 2-hour Early Dismissal professional development and collaboration time will typically be broken down as follows.

- 1 Hour of “formal” Professional Development, facilitated by the following resource personnel.
  - Teacher Leaders/Master Teachers for content-specific trainings;
  - External trainers from the relevant curriculum, as needed;
  - Principal;
  - Special education and EL experts
- 1 Hour of Collaboration and Common Planning Time

Common Planning Time:
MSCP understands that teacher collaboration is critical to creating both a professional learning environment as well as a support structure for teachers.

  - Grade Level: Teachers will have the opportunity to meet in their grade-level teams weekly to discuss individual students’ progress, interdisciplinary projects, and/or other relevant topics. These meetings will occur during the professional development time on Early Dismissal days. Note that Early Dismissal days provide 2 hours dedicated to professional development, and there is an Early Dismissal day once a week.

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Content Area: Teachers will have the opportunity to meet daily with other teachers in their content area, as staff prep periods will be scheduled accordingly. This will enable teachers to share best practices and to seek one another’s advice for common challenges.

Peer Visitation:
MSCP recognizes that a common challenge identified by many teachers is their feeling of isolation. To prevent this feeling and to provide opportunities for valuable peer observations and learning opportunities that support teachers in developing their craft, MSCP will promote a safe, “open door” policy. MSCP will for peer observations of all teachers by both content-area and grade-level peers to occur regularly in an effort to foster a collaborative, supportive staff culture that will ultimately lead to increased student achievement.

MSCP will hold professional development sessions on best practices for conducting peer visitations and for providing feedback and support. These professional development sessions will be led by the Principal, who is the instructional leader of the school. Peer visitations are intended to be positive experiences for both the visitor as well as the teacher being observed. Visitors will have the chance to learn new instructional approaches and to be exposed to different styles of teaching. Meanwhile, the teacher being observed will have an opportunity to demonstrate best practices (or in some cases, less intentionally, possible pitfalls) and to receive helpful peer feedback on his/her lesson plans and implementation.

Principal Evaluation:
While peer visitations both create unique learning opportunities and foster a sense of collaboration and support among staff, Principal evaluations serve as an important professional development tool as well. MSCP will develop a teacher evaluation template that all teachers will receive on the first day of their employment. This template will help ensure that there are clear, high expectations for all teachers as to what the Principal will be looking for during formal evaluations and throughout the year. It should be noted that while a Principal may only conduct 2 formal evaluations during the year per teacher, he or she can be expected to visit classrooms informally daily.

K. Course Transferability and College Entrance Requirements

All MSCP classes will be A-G classes and therefore transferable to other California public schools and in accordance with UC/CSU eligibility (see page 142-144). This transferability of courses and UC/CSU eligibility will be made known on all MSCP recruiting materials, on the MSCP website, and during Parent Orientation. In addition, all parents will be walked through their children’s class progress during their regular meetings with their child’s advisor which occur once every semester and by appointment.

MSCP will seek “Initial Accreditation” from WASC in the first year of operation. MSCP will submit a “Request for WASC Affiliation” and assign a point person to coordinate and submit an “Initial Visit Application/School Description” form, addressing the following five categories: 1) Organization, 2) Standards based Student Learning Curriculum, 3) Standards-based Student Learning Instruction, 4) Standards-based Student Learning Assessment and Accountability, 5) School Culture and Support for Student Personal and Academic Growth\(^\text{18}\). MSCP will comply with WASC standards and processes while under review.

Element 2: Measurable Outcomes for Students

_Governing Law:_ “The measurable pupil outcomes identified for use by the charter school. Pupil outcomes, for purposes of this part mean the extent to which all pupils of the school demonstrate that they have attained the skills, knowledge, and attitudes specified as goals in the school’s educational program.” Ed. Code 47605 (b)(5)(B)

A. Outcome Goals – Skills, Knowledge, and Attitudes
Math and Science College Prep will be a high performance school that will deliver a consistent educational environment and experience for students—preparing every student with the skills, experience, and knowledge to enter college. Our measure for success for students enrolled for four years is that:

- 100% of students will graduate from high school meeting or exceeding LAUSD graduation requirements to receive a high school diploma.
- 100% of students at MSCP from grades nine through twelve will pass the California High School Exit Examination and will be prepared for college- passing University of California and California State University A-G requirements.
- 100% of graduates will be accepted and will make the transition to some level of post secondary education, continuing on to community college or a four-year college/university.

MSCP will accomplish its educational mission through clear expectations and an intensive focus on students meeting Grade Level/Subject State Standards in English/language arts, science, math, history/social sciences and foreign language, as well as a service-learning component.

- Our goal is that at least 80% of students will achieve proficient to advanced performance in English Language Arts content standards (reading, writing, and speaking skills) that shows understanding and effective communication by year 5 of operation.
- MSCP will meet Adequate Yearly Progress goals as required by _No Child Left Behind._
- Our goal is that 100% of students who are English Learners will achieve proficient to advanced levels of fluency in English Language Development as measured by the CELDT test.
- Our goal is that at least 80% of students will achieve proficient to advanced performance in Math and Science content standards demonstrating understanding of the use of math and science to become aware of how the universe works by year 5 of operation.
- Our goal is that at least 80% students will achieve proficient to advanced performance in History/Social Science in understanding of how government, economics and the social sciences impact individual and global interactions by year 5 of operation.
- Our goal is that at least 80% students will demonstrate an understanding of the place of the arts in society and their lives.
- Our goal is that 100% of our students will meet college readiness requirements for a 2-year or 4-year college.

In order to best serve our students and community, Math and Science College Prep will continue to examine and refine its list of student outcomes over time to reflect the school’s mission and any changes to state or local standards that support such mission. The school will submit to the district any changes to the listed student outcomes. Understanding that MSCP is responsible for following the California State Standards and NCLB for students in grades 9-12, specific emphasis is placed on those standards, which prepare students for entry into and success in college. These include all or part of the following:

<table>
<thead>
<tr>
<th>Curricular Focus</th>
<th>Measurable Outcomes</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>English/Language Arts</td>
<td>• Students will read with comprehension, write with clarity, speak with meaning, and possess familiarity with literary works.</td>
<td>English – Grades 9-10, American Literature, Contemporary Composition, Advanced Composition</td>
</tr>
<tr>
<td>Mathematics</td>
<td>• Students will demonstrate an understanding of the symbolic language of mathematics and the use of mathematics in a variety of problem-solving situations.</td>
<td>Algebra 1 (as needed), Geometry, Algebra 2, Pre Calculus, Statistics, A.P. Calculus A/B</td>
</tr>
<tr>
<td>Curricular Focus</td>
<td>Measurable Outcomes</td>
<td>Course</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>A.P. Calculus B/C</td>
<td>Students will be able to use geometric skills and concepts. They will be able to construct formal, logical arguments and proofs in geometric settings and problems. Students will gain experience with algebraic solutions of problems, including the solution of systems of quadratic equations, logarithmic and exponential functions and the binomial theorem, and the complex number system. Students will be able to use trigonometric functions and the ability to provide basic identities regarding them for the study of more advanced mathematics and science. Students will be able to apply mathematics and its intrinsic theory.</td>
<td>Biology, Anatomy &amp; Physiology, Chemistry, Environmental Science</td>
</tr>
<tr>
<td>Biological/Physical Science</td>
<td>Students will demonstrate through investigation and experimentation, an understanding of the principles of physical and life science as well as ecology.</td>
<td>Biology, Anatomy &amp; Physiology, Chemistry, Environmental Science</td>
</tr>
<tr>
<td>History/Social Science</td>
<td>Students will demonstrate intellectual reasoning, reflections, and research skills related to chronological and spatial thinking, historical interpretations, and research, evidence and point of view. Students will demonstrate an understanding of American history, government, economics and a belief in the values of democracy and capitalism.</td>
<td>World History, American History, American Government Economics</td>
</tr>
<tr>
<td>Foreign language and literature</td>
<td>Students will demonstrate the ability in a foreign language to read with comprehension, write with clarity and speak with meaning, as well as possess familiarity with literary works.</td>
<td>Spanish 1-4 (AP), Spanish for Native Speakers 1-4 (AP)</td>
</tr>
<tr>
<td>Visual and Performing Arts</td>
<td>Students will demonstrate some facility with a fine or performing art. Students will understand the place of art in society.</td>
<td>Art</td>
</tr>
<tr>
<td>Community Service</td>
<td>Students will demonstrate that they are active members of their community. Students will participate in meaningful community volunteer efforts.</td>
<td>Service Learning / Internships through the Advisory period (not a graduation requirement.) The Advisory teacher will monitor the community service.</td>
</tr>
<tr>
<td>Health Education</td>
<td>Students will demonstrate that they value lifelong, positive health-related attitudes and behaviors towards their own well being through healthy physical, social and mental habits.</td>
<td>Advisory Groups, Physical Education, Health Education</td>
</tr>
</tbody>
</table>
B. API Goals

The following are the minimum goals for USHS’s API for the following five years:

<table>
<thead>
<tr>
<th>School Year</th>
<th>API Score</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>700</td>
<td>25</td>
</tr>
<tr>
<td>2013-2014</td>
<td>725</td>
<td>25</td>
</tr>
<tr>
<td>2014-2015</td>
<td>750</td>
<td>25</td>
</tr>
<tr>
<td>2015-2016</td>
<td>775</td>
<td>25</td>
</tr>
<tr>
<td>2016-2017</td>
<td>800</td>
<td>25</td>
</tr>
</tbody>
</table>

We expect our API State Rank to be at least an 8 by the fourth year and a Similar School Rank of 10 by the fourth year.

C. AYP AMO Goals

Participation Rate:

- **English-Language Arts**
  - Target 95%
  - MSCP Goal 95%

- **Mathematics**
  - Target 95%
  - MSCP Goal 95%

Percent Proficient:

MSCP will make every effort to meet the 2012-2013 AYP AMO targets of 88.9% Advanced/Proficient in ELA and 88.7% Proficient in mathematics, and 100% in both by 2014.

D. CST Score Goals

Percent Proficient and Advanced:

- Our goal is that at least 80% of students will achieve proficient to advanced performance in English Language Arts by year 5 of operation.
- Our goal is that at least 80% of students will achieve proficient to advanced performance in Math content standards by year 5 of operation.
- Our goal is that at least 80% of students will achieve proficient to advanced performance in Science content standards by year 5 of operation.
- Our goal is that at least 80% students will achieve proficient to advanced performance in History/Social Science by year 5 of operation.

E. CAHSEE Score Goals

100% of students will pass the CAHSEE by graduation. 75% will pass with proficiency in the ELA or Math portions of the exam.

The passage rate first time takers will be 85% in English and math and 95% for those taking the exam a second time.

F. Graduation Rate Goals

100% of students will graduate from MSCP in 4 years.
Individual Student Progress, Reporting, and Communication

Student progress reports and report cards are an important record of student progress, where assessment results are interpreted clearly, meaningfully and consistently. Because of MSCP’s commitment to standards-based grading, student assessment through the grading process will be highly correlated to proficiency levels on the California Content Standards. Student progress reports and report cards create a succinct written record of student performance by compiling data from multiple assessments. Progress reports/report cards are one of several ways to keep parents, faculty, administration and Board members informed about student performance, and insure that data collection is regular and consistent. Additionally, student and teacher attendance and retention rates are also monitored, as these are closely related to student success. Progress report/report cards are distributed eight times a year.

The school will also provide a variety of opportunities for parents and teachers to meet and discuss student progress. This will occur on a formal basis through scheduled parent conference days, as well as on an “as needed” basis throughout the school year.

Teachers meet throughout the year in Professional Learning Communities to discuss assessment results within subject areas, by grade levels, as a whole staff, and in dialogue with students, parents, and administrators. These conversations are used to improve curriculum and instruction as well as to evolve the assessment process itself. Additionally, students also conduct ongoing self-assessments in class.

MSCP will also use the following tools to measure student progress.

- **Placement Exams:** All freshman and new students will be given placement exams, including the CELDT (for English Language Learners), a diagnostic test for Math, and a diagnostic for Spanish. These results will better enable the teachers to set individualized intervention programs for the students at the beginning of the year and ensure proper placement in courses. **Annually**
- **State-Required Tests:** All state required tests including CST, PFT, CAHSEE, and CELDT (for English Language Learners). **Annually**
- **Other Standardized Tests:** PSAT beginning in 10th grade and AP tests for those students enrolled in AP courses. **Annually**
- **Traditional Classroom Assessments:** Quizzes, essays, projects and presentations. Some **Weekly,** **Some Monthly**
- **Formal Interim Assessments:** Common standards-based formative assessments, aligned to curriculum, for each major academic content area. Every core academic class will administer mid-term exams. **Quarterly**
- **Final Exams/ Summative Assessments:** Common standards-based summative assessments, aligned to curriculum, for each major academic content area. Every core academic class will administer final exams at the end of the course. **Bi-Annually**

School-wide Report of Regarding Annual Progress

MSCP will prepare an annual accountability report with multiple elements reflecting on the school’s performance toward meeting the provisions of the charter, including student achievement goals. The report will be available on the schools website and in hardcopy form to all stakeholders, including LAUSD. The entire school community will be responsible for meeting student progress as it relates to academic achievement.
Element 3: Student Assessments

Governed Law: “The method by which pupil progress in meeting those pupil outcomes is measure” CA Education Code Section 47605(b)(5)(C)

A. Assessment Variety

MSCP will use various forms of assessment to measure student knowledge, student achievement, and student progress towards becoming “educated persons in the 21st century”. Students will be assessed regularly from the time they enter the school through graduation, in order for teachers and advisors to be able to monitor their progress closely.

MSCP will use the following tools to measure student progress.

- **Placement Exams**: All freshman and new students will be given placement exams, including the CELDT (for English Language Learners), a diagnostic test for Math, and a diagnostic for Spanish. These results will better enable the teachers to set individualized intervention programs for the students at the beginning of the year and ensure proper placement in courses. **Annually**

- **State-Required Tests**: All state required tests including CST, PFT, CAHSEE, and CELDT (for English Language Learners). **Annually**

- **Other Standardized Tests**: PSAT beginning in 10th grade and AP tests for those students enrolled in AP courses. **Annually**

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- **Final Exams/ Summative Assessments**: Common standards-based summative assessments, aligned to curriculum, for each major academic content area. Every core academic class will administer final exams at the end of the course. **Bi-Annually**

B. Methods Consistent with Instructional Program

MSCP will utilize assessment methods that are consistent with the school’s proposed instructional program, which include a college prep curriculum and the efficient use of technology to further student achievement. Examples include the CSU English diagnostic test, PSAT and SAT, AP tests, adaptive computerized-testing that is consistent with curriculum materials, and real-time assessments.

C. In-House Benchmark

Students will be tested in core academic subjects through “in-house benchmark assessments” quarterly. The specific nature of the assessments will vary by content area. The principal will collaborate with teachers to develop or select authentic assessments with clear rubrics to complement the student achievement reflected by standardized exams. The results of these in-house exams will drive instruction.

D. State Testing Assurances

Math and Science College Prep assures that its students will be assessed using standardized achievement tests as required by the state of California, including CST, PFT, CAHSEE, and CELDT.

Math and Science College Prep will provide the Los Angeles Unified School District with student achievement data as part of its annual performance report. This report, will, at a minimum, include the following data:

1. Summary data showing student progress toward the goals and outcomes listed above with particular emphasis on the API, AYP, CAHSEE and CELDT performance.
2. An analysis of whether student performance is meeting the goals specified in the above. These data will be presented to the entire school and significant subgroups.
3. The number of students taking college entrance examinations.
4. Information required as part of the School Accountability Report Card.
**LAUSD-Specific Language**
The charter school agrees to comply with and adhere to the State requirement for participation and administration of all State mandated tests. If Math and Science College Prep does not test (i.e., STAR, CELDT, CAHSEE) with the District, MSCP hereby grants authority to the state of California to provide a copy of all test results directly to the District as well as the Math and Science College Prep.

**Testing**
If the charter school does not test (i.e., STAR, CELDT, CAHSEE) with the District, a copy of the school’s test results must be submitted to the District on a CD on or before September 30, immediately following that spring’s test administration, except that the CELDT and CAHSEE results must be submitted to the District no later than two weeks after receipt of the CD from the state’s vendor. Please send the CDs to:

Planning, Assessment and Research
School Information Branch
Beaudry Building, 23rd Floor
Attn: Grace Pang Bovy

**E. Collecting, Analyzing, and Reporting Data**

Math and Science College Prep will download results of various assessments into its student data management system. Downloading will come in the form of automatic population from digitalized tests, or user-entered data from classroom assessments. The school’s sophisticated data management system allows users to disaggregate the data in many useful ways, giving teachers and administration the ability to identify areas of strengths and weaknesses in individuals or a student body as a whole. This data will be compiled and key findings will be brought before the staff and board during professional development time and board meetings, respectively.

MSCP will use standards-based grading as its grading policy. Teachers will enter student scores into the data management system. Parents, teachers, students, and administrators will have access to this system. Progress reports will be issued every 5 weeks and a final semester report card will be issued every 20 weeks.

Grades will awarded by letter grade (A, B, C, etc.) and Grade Point Averages will be set to a 4.0 scale. Any semester grade below a “C” will be considered failing, as that grade will not count toward UC/CSU admission, and therefore, the student must re-enroll in that particular course until successful completion.

The school, as detailed in Element 1, has put in place significant support structures for students who are low-achieving and who need extra attention to succeed in their coursework.

MSCP will compile and publish a School Accountability and Report Card (SARC) annually, in accordance with State and Federal regulations. The SARC will include information about the school including, but not limited to, student demographics, student achievement, human resources, facilities, program participation, finance, and instruction. MSCP will follow the SARC template provided by the California Department of Education. The SARC shall be published annually, after the Board of Director’s “State of the School” meeting in November. The SARC will be published on the school website and will be disseminated to parents.

**F. Assessment to Drive Instruction**

MSCP staff will use data to both drive classroom instruction and program individualized supplemental work for students. This use of data is both a core value and common practice at MSCP.

MSCP staff will gather and analyze data from various assessments, looking for trends in student learning and lessons that may need to be reviewed further. Staff members will meet in both common subject matter and grade levels to discuss variances among students and/or specific lesson plans.

MSCP staff will take information learned from the data, and adjust their lessons accordingly, understanding which standards need to be reviewed or presented in a different way, and which standards the students have been mastered. The results of the data will also enable teachers to provide students with individualized practice opportunities, either in class or during tutoring hours. Only after mastery, will the student be allowed to progress through his/her personalized learning plan.
Element 4: Governance

Governing Law: The governance structure of the school, including, but not limited to, the process to be followed by the school to ensure parental involvement. -- California Education Code Section 47605(b)(5)(D)

A. Evidence of Non-Profit Incorporation

MSCP is registered with the Secretary of State’s Office as a non-profit public benefit corporation. MSCP has been issued an EIN and its 501(c)3 status with the federal government is pending.

B. By-Laws for Non-Profit Public Benefit Corporation
(See Attachment 2)

C. Evidence of Organizational and Technical Designs

MSCP proposes to be an independent charter school. The MSCP Board of Directors, in accordance with its adopted corporate bylaws will govern MSCP in a manner consistent with the terms of this charter.

The Board of Directors will provide external accountability, oversight and guidance to ensure the school’s ongoing success. It will meet at least quarterly (every month in the first year of operations) to review MSCP’s achievements and provide support in achieving short-term and long-term goals set by the board.

The Executive Director and Principal shall be responsible for day-to-day management of MSCP.

Board of Directors - The MSCP Board of Directors currently consists of:

- **Carmen Vazquez** - Principal of Alliance College-Ready Academy High School #16, veteran educator, and an expert in ELL instruction.
- **Michael Trujillo** - Engineer for Boeing Satellite Development Center. Michael brings many ideas for hand-on science exploration outside of the classroom and connections to math and science professional that can serve as role models for students.
- **Andrew Kubasek** - Accountant and Credit Collection specialist for Quinn Emanuel Law Firm. Mr. Kubasek manages a portfolio of accounts that totals at $46,000,000 and brings expertise in budget management and development.
- **Emilio Pack** - Former Principal and Director of New School Development for Alliance College-Ready Public Schools and current professor at Loyola Marymount University and administrator of the Charter School Leadership Academy and specialized administrative credential/masters degree program in charter school administration.
- **Michael Flores** - Principal/Director/Manager for RMC Water and Environment, an environmental engineering company. Michael has managed multi-million dollar projects and has expertise in infrastructure management, operations, maintenance, and capital program planning.

Board Duties
The Board of Directors is fully responsible for the operation and fiscal affairs of the School. It will maintain active and effective control of the charter school, through the exercise of the following duties, including but not limited to:

- Hire and evaluate the Executive Director of the School.
- Hire, promote, discipline and dismiss all employees of MSCP after consideration of a recommendation by the Executive Director of MSCP.
- Approve all contractual agreements and purchases over $10,000.
- Approve and monitor the implementation of general policies of MSCP.
- Develop and monitor an operational business plan that focuses on student achievement.
- Approve and monitor MSCP’s annual budget.
- Act as a fiscal agent. This includes the receipt of funds for the operation of The MSCP in accordance with its laws and the receipt of grants and donations consistent with the mission of MSCP and the establishment of investment procedures.
- Contract with an external auditor to produce an annual financial audit according to generally accepted accounting practices.
- Regularly review progress of both student and staff performance.
- Develop, review, or revise MSCP’s accountability and mission.
- Approve the school calendar and schedule of Board meetings.
- Develop Board of Directors policies and procedures.
- Participate in the dispute resolution procedure and complaint procedures when necessary.
- Approve charter amendments.
- Approve annual fiscal audit and performance report.
- Appoint an administrative panel to act as a hearing body and take action on recommended student expulsions.
- Execute all other responsibilities provided for in the California Corporations Code.

The Board may initiate and carry on any program or activity or may otherwise act in a manner which is not in conflict with or inconsistent with or preempted by any law and which is not in conflict with the purposes for which schools are established.

The MSCP Board of Directors will attend an annual in-service for the purposes of training individual Board members on their responsibilities through MSCP’s affiliation with California Charter Schools Association (CCSA) and other Board training opportunities.

Advisory Board
In addition to the Board of Directors, an Advisory Board will be formed for the purposes of allowing partners, field experts, and foundations to provide valuable input toward the policies set by the Board of Directors. The Advisory Board will not have any governance powers, and will not be active in the day-to-day management of the school. The Advisory Board will meet annually, at a minimum, to review the progress of the school, evaluate the performance of the school leadership, and analyze public-private partnerships.

School Site Council
In accordance with State regulations for receiving supplemental funding, Math and Science College Prep will form a school site council (“SSC”). The school site council will advise the Principal and staff on the planning, implementation, and evaluation of the school improvement plan, and to allocate SIP funds from the state to support the goals of the school plan. The SSC reviews the progress of the school in achieving the goals of the plan.

The school site council will be comprised of one teacher from each grade level, one parent/guardian from each grade level, and the school Principal. Additionally, a student representative will attend. The school site council will report to the Board of Directors and the Executive Director. The school site council will meet monthly. Parents will volunteer to serve on the school site council. If more than one parent volunteers per grade level, the parents will vote for a representative.

Executive Director
The founder and Executive Director of MSCP, Dr. Emilio Pack, has an extensive career in education, first as a school counselor and eventually as a school principal. In 2006, Dr. Pack opened what eventually became one of the highest performing high schools in all of Los Angeles, Alliance Dr. Olga Mohan High School (FKA: College-Ready Academy High School #4). While leader of College-Ready Academy High School #4, Dr. Pack created a schoolwide system of grading, called standards-based grading, where students were given multiple attempts to prove proficiency and mastery in each content. This innovative approach to grading resulted in an increase on the API of over 120 points in one year. After seeing much success and winning the Effective Practice Incentive Community (EPIC) Silver Gain Award in 2007, Dr. Pack moved into a leadership position with the Alliance for College-Ready Public Schools (Alliance), as the Director of New School Development. While Director of New School Development, Dr. Pack worked with candidates in the principal intern program and guided them in the process of opening new schools within the Alliance. Dr. Pack mentored principal interns in areas such as instruction and business/operations. In addition to working with developing principals, Dr. Pack was also responsible for writing new and renewal charter petitions for middle and high schools in the Alliance. In 2008, Dr. Pack left the Alliance and joined the faculty of Loyola Marymount University (LMU), School of Administration Department. As faculty of LMU, Dr. Pack continues to work with future leaders as the lead professor in the Charter School Leadership Academy. In addition, he serves as the Assistant Director of Institute of School Leadership and Administration. Dr. Pack’s extensive career in education and in particularly as a
mentor to new leaders, make him a qualified Executive Director of MSCP. He has a proven track record of running both a strong instructional program, a fiscally sound school, and inspiring leadership potential in others.

Principal
Math and Science College Prep will open under the site leadership of a highly qualified principal. The founding principal, Janette Rodriguez, has experience in instruction and operation. Currently the principal of the 4th highest performing high school in LAUSD, Alliance Dr. Olga Mohan High School (ADOMHS), Ms. Rodriguez has a proven track record of working with minority students from the Los Angeles community and leading a team of instructional staff in running a highly successful high school. While principal of ADOMHS, the school has seen much success. In 2011, it was named the California Charter School of Year and received the Hart Vision Award. Other accomplishments include, 2009 California Distinguished High School, 2010 EPIC Gold Gain Award, 2010 and 2011 Title I Academic Achievement Award. Additionally, Ms. Rodriguez was acknowledged as the Alliance Principal of the Year in 2010. The projected API for ADOMHS for 2011 is currently projected at 895 and the graduation rate for the class of 2011 is 100%, with a 94% 4-year college acceptance rate. Under the leadership of Ms. Rodriguez, it is anticipated that MSCP will see similar results.

Grievance Procedure for Parents and Students
Math and Science College Prep will designate at least one employee to coordinate its efforts to comply with and carry out its responsibilities under Title IX of the Education Amendments of 1972 (Title IX) and Section 504 of the Rehabilitation Act of 1973 (Section 504) including any investigation of any complaint filed with Math and Science College Prep alleging its noncompliance with these laws or alleging any actions which would be prohibited by these laws. Math and Science College Prep will notify all its students and employees of the name, office address, and telephone number of the designated employee or employees.

Math and Science College Prep will adopt and publish grievance procedures providing for prompt and equitable resolution of student and employee complaints alleging any action, which would be prohibited by Title IX, or Section 504.

Math and Science College Prep will implement specific and continuing steps to notify applicants for admission and employment, students and parents of elementary and secondary school students, employees, sources of referral of applicants for admission and employment, and all unions or professional organizations holding collective bargaining or professional agreements with the recipient, that it does not discriminate on the basis of sex or mental or physical disability in the educational program or activity which it operates, and that it is required by Title IX and Section 504 not to discriminate in such a manner.

D. Process for Selecting Board Members
The Board of Directors will be composed of highly qualified individuals who have demonstrated a passion for advancing educational opportunities for children, particularly children that have historically been underserved. The term for each Board member is two years. These individuals will possess outstanding leadership and analytical skills. They will represent a diverse field of professions and ethnic backgrounds. Given the current five Board members possess collectively finance, education, fundraising and community leadership expertise, the Board will seek leaders in the fields of law, facilities/real estate and marketing as it considers new membership. MSCP has already identified many potential new Board members who have expressed an explicit desire to serve on the Board. It would be preferable to select new members who are residents of the Koreatown community. Board members must nominate potential new Board members to the Board Chair. Nominees will be interviewed by the entire Board before a vote is taken. Nominees must gain unanimous support from the existing Board to be offered a Board seat. New Board members will take an oath of office and agree to the provisions of the charter.

E. Board Meeting Frequency
The Board of Directors will once a month in the school’s first year of operation. After the first year, the Board will meet quarterly, at a minimum. Subcommittees will meet regularly and report to the entire Board at each Board meeting. All Board meetings will be conducted in accordance with the Brown Act. The Board of Directors shall set aside one meeting, annually, for the purpose of organization, appointment of officers, and the transaction of such other business as may properly be brought before the
meeting. This meeting shall be held in July of each year, at a time, date, and place as may be specified and noticed by resolution of the Board of Directors.

The Board will hold an annual “State of the School” meeting every November, at a time and place that is convenient for all staff, parents, and students to attend. At this meeting, the Board will review its own performance and measure the school’s progress toward stated goals.

F. Public Notification of Meetings

According to the Ralph M. Brown Act, regular meetings of the Board of Directors, including annual meetings, shall be held at such times and places as may from time to time be fixed by the Board of Directors. At least 72 hours before a regular meeting, the Board of Directors, or its designee, shall post an agenda containing a brief general description of each item of business to be transacted or discussed at the meeting. Agendas will be posted in areas that are convenient to staff, students, and parents for viewing, including, but not limited to: the school website, on doors to the school, and at the nearest public library.

In accordance with the Brown Act, special meetings of the Board of Directors may be held only after twenty-four (24) hours notice is given to each Director and to the public through the posting of an agenda.

Minutes for regular and special meetings will record all actions taken by the Board of Directors. Minutes of the previous meeting will be included in the following month’s agenda and all recorded minutes will be archived and available to the public upon request.

G. Organizational Chart

† The IT specialist is a classified position, meant to support the computers in the building. MSCP believes that freeing the principal of technology maintenance and allowing the principal to concentrate on student achievement is the best option for the school.

*At full capacity, MSCP will add more full time staff in the front office, instructional aides, and monitors. The Executive Director and the Principal will be in charge of yard duties during the first two years.
H. Board Member Resumes and Questionnaires

See Attachment 8.

I. Brown Act Assurances

Math and Science College Prep will comply with the Brown Act and Government Code 1090.

J. Legal Assurances

Math and Science College Prep will be solely responsible for the debts and obligations of Math and Science College Prep.

Any amendments to the charter school’s bylaws, or the bylaws of a “parent” nonprofit corporation, that affect or impact the charter or school operations must be approved through the District’s petition amendment process.

Members of the Math and Science College Prep Board of Directors, any administrators, managers or employees, and any other committees of the school shall comply with Federal and State laws, non-profit integrity standards and the LAUSD’s Charter School policies and regulations regarding ethics and conflicts of interest.

The Math and Science College Prep will comply with the District policy related to charter schools, as it may change from time to time.

Responding to Inquiries (LAUSD-Specific Language)

The Math and Science College Prep shall promptly respond to all inquiries, including but not limited to, inquiries regarding financial records, from the District and shall consult with the District regarding any inquiries. The Math and Science College Prep acknowledges that it is subject to audit by LAUSD including, without limitation, audit by the District Office of the Inspector General.

Notifications (LAUSD-Specific Language)

Notification is to be made to the Charter Schools Division in writing of any notices of workplace hazards, investigations by outside regulatory agencies, lawsuits, or other formal complaints, within one week of receipt of such notices by Math and Science College Prep.

Audit and Inspection of Records

Math and Science College Prep agrees to observe and abide by the following terms and conditions as a requirement for receiving and maintaining their charter authorization:

- The Math and Science College Prep is subject to District oversight.
- The District’s statutory oversight responsibility continues throughout the life of the Charter and requires that it, among other things, monitor the fiscal condition of Math and Science College Prep.
- The District is authorized to revoke this charter for, among other reasons, the failure of Math and Science College Prep to meet generally accepted accounting principles or if it engages in fiscal mismanagement.

Accordingly, the District hereby reserves the right, pursuant to its oversight responsibility, to audit Math and Science College Prep books, records, data, processes and procedures through the District Office of the Inspector General or other means. The audit may include, but is not limited to, the following areas:

- Compliance with terms and conditions prescribed in the Charter agreement,
- Internal controls, both financial and operational in nature,
- The accuracy, recording and/or reporting of school financial information,
- The school’s debt structure,
- Governance policies, procedures and history,
- The recording and reporting of attendance data,
- The school’s enrollment process,
- Compliance with safety plans and procedures,
Compliance with applicable grant requirements.

Math and Science College Prep shall cooperate fully with such audits and to make available any and all records necessary for the performance of the audit upon 30 days notice to Charter School. When 30 days notice may defeat the purpose of the audit, the District may conduct the audit upon 24 hours notice.

In addition, if an allegation of waste, fraud or abuse related to Math and Science College Prep operations is received by the District, Math and Science College Prep shall be expected to cooperate with any investigation undertaken by the Office of the Inspector General, Investigations Unit.

Grievance Procedure for Parents and Students
MSCP will designate at least one employee to coordinate its efforts to comply with and carry out its responsibilities under Title IX of the Education Amendments of 1972 (Title IX) and Section 504 of the Rehabilitation Act of 1973 (Section 504), including any investigation of any complaint filed with MSCP alleging its noncompliance with these laws or alleging any actions which would be prohibited by these laws. MSCP will notify all its students and employees of the name, office address, and telephone number of the designated employee or employees.

MSCP will adopt and publish grievance procedures providing for prompt and equitable resolution of student and employee complaints alleging any action, which would be prohibited by Title IX, or Section 504.

MSCP will implement specific and continuing steps to notify applicants for admission and employment, students and parents of elementary and secondary school students, employees, sources of referral of applicants for admission and employment, and all unions or professional organizations holding collective bargaining or professional agreements with the recipient, that it does not discriminate on the basis of sex or mental or physical disability in the educational program or activity which it operates, and that it is required by Title IX and Section 504 not to discriminate in such a manner.

LAUSD-Specific Language
MSCP and/or its non-profit corporation is a separate legal entity and will be solely responsible for the debt and obligations of the charter school.

MSCP will comply with the Brown Act.

Members of MSCP’s executive board, any administrators, managers or employees, and any other committees of the School shall comply with federal and state laws, non-profit integrity standards and LAUSD’s Charter School policies and regulations regarding ethics and conflicts of interest.

The District reserves the right to appoint a single representative to the charter school board pursuant to Education Code section 47604(b).

LAUSD Charter Policy (LAUSD-Specific Language)
MSCP will comply with the District policy related to charter schools, as it may be changes from time to time after notice and reasonable opportunity for input from the Charter School Collaborative.
Element 5: Employee Qualifications

**Governing Law:** “The qualifications to be met by individuals to be employed by the school.” Ed. Code 47605 (b)(5)(E)

MSCP believes that all persons are entitled to equal employment opportunity. MSCP shall not discriminate against qualified applicants or employees on the basis of race, color, religion, sex, gender identity, sexual orientation, pregnancy, national origin, ancestry, citizenship, age, marital status, physical disability, mental disability, medical condition, or any other characteristic protected by California or federal law. Equal employment opportunity shall be extended to all aspects of the employer-employee relationship, including recruitment, hiring, upgrading, training, promotion, transfer, discipline, layoff, recall, and dismissal from employment.

Math and Science College Prep believes that staff selection is the most important element to creating and maintaining a high quality school. The founding leadership has extensive experience in school staffing that will benefit the school as it begins to hire new staff.\(^20\)

### A. General Qualifications

MSCP agrees to comply with the provisions of No Child Left Behind (NCLB) as they apply to certificated and paraprofessional employees of charter schools. It will conform to the legal requirement that all teachers shall hold a Commission on Teacher Credentialing certificate, permit, or other document equivalent to that which a teacher in other public schools would be required to hold. MSCP will maintain current copies of all teacher credentials and ensure that they are readily available for inspection. MSCP will take all steps necessary to minimize the use of teachers holding emergency credentials, including active recruitment of duly credentialed teachers through local colleges and universities, EdJoin, Teach For America, and local newspapers.

The MSCP will employ the following selection process for staffing:

1. Create a job application requiring an appropriate certificate or credential and disclosure of criminal records
2. Announce opening
3. Recruit applicants
4. Request resume, references, records of experiences, credentials, licenses, etc.
5. Verify previous employment
6. Interview candidates
7. Observe demonstration class taught by candidates (for instructional positions)
8. Select top candidate
9. Negotiate salary and sign the candidate

Background checks will required of all employees.

These include a Federal Office of Justice fingerprint check for criminal record and child abuse. Authorizations to work in the United States and TB clearances will also be required.

### B. Positions and Qualifications

The following is a list of key personnel to be employed by MSCP in its first year, along with corresponding qualifications:

**Executive Director**

Overall Qualifications:
- Demonstrated experience in leadership and management
- At least 5 years experience in the field of charter school education
- Demonstrated organizational development leadership
- Demonstrated ability to create and manage budgets

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\(^20\) See Attachment 6 for leadership’s resumes.
• Demonstrated experience with Board relations and reporting
• Demonstrated experience in school finance and non-profit management
• Demonstrated expertise in partnership development and fundraising
• Knowledge of and experience in school governance
• Demonstrated experience in government/agency relations
• Demonstrated commitment to continuous improvement process and utilization of data in school improvement
• Background Clearance from FBI/DOJ
• TB Clearance

Principal

Overall Qualifications:
• Professional Administrative Credential and/or Masters Degree in Education or equivalent
• At least 5 years experience in the education field
• Minimum of three years teaching experience
• Proven experience as an instructional leader
• Demonstrated experience using technology in the classroom
• Proven success with raising academic achievement with a diverse student population
• Demonstrated experience using data-driven instructional systems
• Experience supervising and evaluating staff
• Familiarity with California Department of Education rules and regulations
• Experience managing school budgets
• Visionary leadership and a passion for education reform
• Ability to form productive relationships with a highly diverse group of students, families, and staff
• Desire to be held accountable for school performance
• Interest in and knowledge of the evolving education technology market
• Excellent communication and organizational skills
• Entrepreneurial spirit with an ability to thrive in a start-up environment
• Charter school experience preferred
• Familiarity with California state standards and assessments preferred
• Ability to speak multiple languages preferred (Spanish)
• Familiarity with the proposed area for the school preferred
• Background Clearance from FBI/DOJ
• TB Clearance

Teacher Leaders/Master

Overall Qualifications:

MSCP teachers at all levels shall meet or exceed all "highly qualified requirements" under the No Child Left Behind Act ("NCLB"). Accordingly, teachers of core academic subjects must have:

• Minimum of 5 years full-time teaching experience
• Demonstrated success improving student achievement with similar populations
• A State single-subject high school credential
• Background clearance from FBI/DOJ
• TB clearance

Recruiting Teacher Leaders/Master Teachers will be the single most important task charged to the Executive Director and Principal. One of the core beliefs of this school is that placing talented, experienced, proven teachers in 9th grade is the best way to improve student achievement, not only in 9th grade, but also in subsequent years. 9th grade sets the tone for the school, and advanced coursework cannot be accessed unless all students are proficient in the basics. Therefore, the Executive Director and the Principal will spend a great deal of time and effort to identify talented teachers and lure them to MSCP, conveying better working environment and higher compensation as attractive qualities that most teachers desire.

Recruitment strategies for Teacher Leaders/Master Teachers include utilizing:
• TFA Alumni
• CCSA network
• Universities and Colleges (Master’s programs)
• EdJoin
• Professional networking including prior contacts of Principal and Executive Director.
Teacher
Overall Qualifications:

MSCP teachers at all levels shall meet or exceed all “highly qualified requirements” under the No Child Left Behind Act (“NCLB”). Accordingly, a teacher of core academic subjects must have:

- A State single-subject high school credential or have an Intern Certificate/Credential for no more than three years while actively working toward completion of their State credential, and demonstrated expertise
- Background Clearance from FBI/DOJ
- TB Clearance

Recruitment strategies for teachers include utilizing:
- TFA Alumni
- CCSA Network
- Universities and Colleges
- EdJoin
- Professional Networking
- Troops to Teachers
- New Teacher Project

Counselor
Overall Qualifications

- Minimum of 1 year full-time high school counseling experience
- Minimum of 1 year college-prep counseling experience
- Demonstrated success with similar populations
- A State credential for school counseling
- Background Clearance from FBI/DOJ
- TB Clearance

Recruitment strategies for Counselor include utilizing:
- CCSA Network
- Universities and Colleges
- EdJoin
- Professional Networking

Administrative Office Personnel
Overall Qualifications:

- Education: High School Diploma or equivalent
- Possession of a valid First Aid Certificate
- Background Clearance from FBI/DOJ
- TB Clearance
- Knowledge of communication skills; general office procedures and correct use of English and Spanish punctuation, spelling, and grammar
- Ability to perform routine clerical duties such as posting data, filing, maintaining filing systems, proofreading, copying data, and operating office machines and equipment
- Ability to act as receptionist on the telephone and in person; maintain good public relations with students, parents, staff, and community

Provides support in year one to the Principal/Executive Director in the carrying out of administrative tasks. In year two, provides support to the Office Manager.

Front Desk/Registrar

- Education: High School Diploma or equivalent
- Possession of a valid First Aid Certificate
- Background Clearance from FBI/DOJ
- TB Clearance
- Experience collecting, organizing, and analyzing student records for the purposes of student enrollment, transfers, transcript preparation, and scheduling
 Excellent communication skills, including knowledge of general office procedures and correct use of English and Spanish punctuation, spelling, and grammar
 Ability to perform routine clerical duties, such as posting data, filing, maintaining filing systems, proof-reading, copying data, and operating office machines and equipment

IT Specialist
 High School Diploma, preferably an AA
 Certified Microsoft technician
 Background Clearance from FBI/DOJ
 TB Clearance
 Experience supporting a small to mid-size organization in the area of information technology, including setting up networks, email accounts, and databases.
 Ability to diagnose and fix small computer problems.
 Ability to seek additional support from vendors, when needed.

Salaries and Benefits
MSCP employees will receive compensation commensurate with their responsibilities and experience. The teacher salary range for MSCP will be considerably higher than that of LAUSD pay scale for similarly experienced teachers. The rational for this is that MSCP wants to recruit a class of seasoned, talented, proven teachers with at least 5 years of experience, particularly in its first year of operation. Because MSCP will not be able to offer the lifetime benefits that LAUSD offers to senior teachers, MSCP will need to offer higher salaries to attract high caliber teachers.

All full-time employees of MSCP are eligible for health benefits that will be negotiated and contracted through the Board of Directors. Teachers will also be provided $1 million in liability insurance by the school.

The school’s yearly calendar, holidays, length of workday and work year, sick days, personal days, and due process procedures for disputes will be developed by the Board of directors, with school leaders serving as advisors.

Performance Evaluations
All administration, faculty, and staff will be evaluated at least annually (and for teachers at least twice per year) according to specific performance measures that will be detailed in a performance rubric for each staff member, but, at a minimum, will include the measures listed below.

The MSCP Board of Directors will evaluate the Executive Director on:
 Achievement of the mission and vision of the school;
 Achievement of mutually agreed upon annual goals in relation to facility acquisition, fundraising, and partnership development;
 Maintenance and oversight of fiscal activities and keeping a sound budget;
 Human resources, staff recruitment, selection, retention and performance; and
 Parent and student satisfaction.

The Executive Director will evaluate the Principal on:
 Academic outcomes, including student attendance, grades, test scores, retention, and progression;
 Development and guidance of the academic program to ensure high academic success;
 Level of community and parent involvement;
 Maintenance and oversight of fiscal activities, including a sound budget;
 Development and maintenance of a positive school climate, and
 Staff performance;
 Other duties as assigned.

The Principal will evaluate Teachers ongoing, on:
 Effective teaching practice;
 Improvement of student learning; and
 Performance of job duties as assigned.
The Principal will evaluate the Counselor on:

- Effective monitoring of student course work to meet A-G requirements;
- Effective guidance given to students regarding higher education opportunities;
- Graduation requirements being met by all students; and
- Effective guidance on financial aid.

The Executive Director shall also evaluate all other campus personnel that will serve as a direct report to the Executive Director, as outlined in specific job descriptions, on effectiveness as a MSCP team member, and on regular, punctual attendance.

The Principal will schedule a conference with each employee receiving an evaluation of “low-performing”. This conference shall be for the purpose of writing an Action Plan that outlines areas of improvement, provides a plan of intervention through staff development and support, and sets expectations and a timeline for completion of Action Plan targets. In addition, the Action Plan will identify consequences for failure to comply with any component of the plan.

An employee who disagrees with his/her evaluation may file a written complaint. This objection may be attached to the evaluation. All employees have the right to Due Process and to Grievance Procedures.

All staff will be evaluated formally by their supervisors at least annually. Annual goals and objectives will be developed jointly by staff members and supervisors in accordance with the mission and vision of MSCP. Staff evaluations will be based on the degree to which goals and objectives have been achieved. If a staff member is having difficulties achieving his/her goals, the supervisor will provide appropriate support and training. Those staff members not meeting expectations may be given at least one verbal warning, followed by two written warnings and thirty (30) days notice. If there is no improvement, the staff member will be terminated. If a grievance arises regarding the evaluation process, an employee should attempt to resolve the issue with his or her immediate supervisor. If the dispute cannot be resolved at this level, the employee should address his or her grievance in writing to the Principal who will schedule a meeting regarding the grievance issues with all parties involved at a time and place that is mutually convenient for all. If the issue still remains unresolved, the staff member may request a meeting with the Board of Directors who will provide a final decision in the matter.

**Outside Contractors**

MSCP will contract with an outside provider for financial services in the first and second year. After Year 2, the Executive Director, with appropriate training, will assume many of the fiscal and reporting responsibilities.

MSCP will continue to outsource payroll and other specialized services, such as food service, grounds keeping, custodial services, and security. With the provision of security on campus, MSCP will follow applicable Federal and State laws. Special education services will be contracted out to either LAUSD or another provider.

The Executive Director will be responsible for the evaluation of outside contractors. The evaluations will be presented to the Board of Directors. The Board of Directors will have ultimate contract authority.

**C. Assurances and Background Checks**

MSCP agrees to comply with the provisions of No Child Left Behind (NCLB) as they apply to certificated and paraprofessional employees of charter schools. It will conform to the legal requirement that all Math and Science College Prep teachers shall hold a Commission on Teacher Credentialing certificate, permit, or other document equivalent to that which a teacher in other public schools would be required to hold.

Math and Science College Prep will maintain current copies of all teacher credentials and ensure that they are readily available for inspection.

The Executive Director will ensure that credentials are processed and monitored in accordance with requirements as set forth by the Commission for Teacher Credentialing and the State’s interpretation of Highly Qualified for the purposes of compliance with No Child Left Behind. Credentials will be reviewed during the hiring process for new teachers and reviewed on an annual basis for all staff. Staff members will be informed of any required modifications/updating of credentials.
Element 6: Student Health and Safety Procedures

**Governing Law:** The procedures that the school will follow to ensure the health and safety of pupils and staff. These procedures shall include the requirement that each employee of the school furnish the school with a criminal record summary as described in Section 44237—California Education Code Section 47605 9(b)(5)(F)

A. Criminal Background

Employees and contractors of Math and Science College Prep will be required to submit to a criminal background check and finish a criminal record summary as required by Ed. Code 44237 and 45125.1. New employees not possessing a valid California Teaching Credential must submit two sets of fingerprints to the California Department of Justice for the purpose of obtaining a criminal record summary. The Executive Director of the school shall monitor compliance with this policy and report to the Math and Science College Prep Board of Directors on a quarterly basis. The Board shall monitor the fingerprinting and background clearance of the Principal. Volunteers who will volunteer outside of the direct supervision of a credentialed employee shall be fingerprinted and receive background clearance prior to volunteering without the direct supervision of a credentialed employee.

B. Tuberculosis Screening

Faculty, staff and volunteers will be tested for tuberculosis prior to commencing employment and working with students as required by Education Code Section 49406. All students enrolled and staff will be required to provide records documenting immunizations, as is required at public schools pursuant to Health and Safety Code Section 120325-120375, and Title 17, California Code of Regulations Section 6000-6075.

C. Required Immunizations

MSCP will require the immunization of pupils as a condition of school attendance to the same extent as would apply if the pupils attended a non-charter school. Proof of immunization will be collected and filed by the school registrar.

D. Pupil Vision and Hearing

Students will be screened for vision and hearing. Math and Science College Prep will adhere to Education Code Section 49450, et seq., as applicable to the grade levels served by the school.

E. Facility Address

The address of Math and Science College Prep is to be determined, but will fall within the Los Angeles City limits.

F. ADA Compliance

Math and Science College Prep shall comply with Education Code Section 47610 by either utilizing facilities that are compliant with the Field Act or facilities that are compliant with the state building codes. The School agrees to test sprinkler systems, fire extinguishers, and fire alarms annually at its facilities to ensure that they are maintained in an operable condition at all times.

Math and Science College Prep assures that the school’s facilities and any modifications made to its facilities will comply with state building codes, federal Americans with Disabilities Act (ADA) access requirements, and other applicable fire, health and structural safety requirements, and will maintain on file readily accessible records documenting such compliance.

G. Certificate of Occupancy Assurance

Math and Science College Prep assures that a site will be secured with an appropriate Certificate of Occupancy 45 days prior to the opening of school. The Math and Science College Prep assures that a school safety plan will be developed and kept on file for review, and that school staff will be trained annually on the safety procedures outlined in the plan.
If LAUSD facilities are used during the term of this charter, Math and Science College Prep shall abide by all LAUSD policies relating to Maintenance and Operations Services.

H. School Safety Plan Assurances

Math and Science College Prep shall adhere to an Emergency Preparedness Handbook drafted specifically to the needs of the school site in conjunction with law enforcement and the Fire Marshall. This handbook shall include, but not be limited to the following responses: fire, flood, earthquake, terrorist threats, and hostage situations. The school staff will be trained annually on emergency response and safety. A copy of the school safety plan will be kept on file at the school site. If assuming a facility used prior as a School site, any existing emergency preparedness plan for the school site shall be used as a starting basis for updating the handbook for the Charter School.

Insurance Requirements (LAUSD-Specific Language)

No coverage shall be provided to MSCP by the LAUSD under any of the LAUSD’s self-insured programs or commercial insurance policies. MSCP shall secure and maintain, as a minimum, insurance as set forth below with insurance companies acceptable to the LAUSD [A.M. Best A-; VII or better] to protect the charter school from claims which may arise from its operations. Each charter school location shall meet the below insurance requirements individually.

It shall be MSCP’s responsibility, not the District’s, to monitor its vendors, contractors, partners or sponsors for compliance with the insurance requirements.

The following insurance policies are required:

1. Commercial General Liability coverage of $5,000,000 per Occurrence and in the Aggregate. The policy shall be endorsed to name the Los Angeles Unified School District and the Board of Education of the City of Los Angeles as named additional insured and shall provide specifically that any insurance carried by the District which may be applicable to any claims or loss shall be deemed excess and the charter school's insurance primary despite any conflicting provisions in the charter school's policy. Coverage shall be maintained with no Self-Insured Retention above $15,000 without the prior written approval of the Office of Risk Management for the LAUSD.

2. Workers' Compensation Insurance in accordance with provisions of the California Labor Code adequate to protect the charter school from claims that may arise from its operations pursuant to the Workers’ Compensation Act (Statutory Coverage). The Workers’ Compensation Insurance coverage must also include Employers Liability coverage with limits of $1,000,000/$1,000,000/$1,000,000.

3. Commercial Auto Liability coverage with limits of $1,000,000 Combined Single Limit per Occurrence if the charter school does not operate a student bus service. If the charter school provides student bus services, the required coverage limit is $5,000,000 Combined Single Limit per Occurrence.

4. Fidelity Bond coverage shall be maintained by the Charter School to cover all charter school employees who handle, process or otherwise have responsibility for charter school funds, supplies, equipment or other assets. Minimum amount of coverage shall be $50,000 per occurrence, with no self-insured retention.

5. Professional Educators Errors and Omissions liability coverage with minimum limits of $3,000,000 per occurrence and $3,000,000 general aggregate.

6. Sexual Molestation and Abuse coverage with minimum limits of $3,000,000 per occurrence and $3,000,000 general aggregate. Coverage may be held as a separate policy or included by endorsement in the Commercial General Liability of or the Errors and Omissions Policy.

7. Employment Practices Legal Liability coverage with limits of $3,000,000 per occurrence and $3,000,000 general aggregate.
8. Excess/umbrella insurance with limits of not less than $10,000,000 is required of all high schools and any other school that participates in competitive interscholastic or intramural sports programs.

Coverage and limits of insurance may be accomplished through individual primary policies or through a combination of primary and excess policies. The policy shall be endorsed to name the Los Angeles Unified School District and the Board of Education of the City of Los Angeles as named additional insured and shall provide specifically that any insurance carried by the District which may be applicable to any claims or loss shall be deemed excess and the charter school's insurance primary despite any conflicting provisions in the charter school's policy.

Evidence of Insurance (LAUSD-Specific Language)
MSCP shall furnish to the District’s Office of Risk Management and Insurance Services located at 333 S. Beaudry Ave, 28th Floor, Los Angeles CA 90017 within 30 days of all new policies inceptions, renewals or changes, certificates or such insurance signed by authorized representatives of the insurance carrier. Certificates shall be endorsed as follows:

“The insurance afforded by this policy shall not be suspended, cancelled, reduced in coverage or limits or non-renewed except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the District."

Facsimile or reproduced signatures may be acceptable upon review by the Office of Risk Management and Insurance Services. However, the District reserves the right to require certified copies of any required insurance policies.

Should MSCP deem it prudent and/or desirable to have insurance coverage for damage or theft to school, employee or student property, for student accident, or any other type of insurance coverage not listed above, such insurance shall not be provided by the District and its purchase shall be the responsibility of MSCP.

Additionally, MSCP will at all times maintain a funds balance (reserve) of its expenditures as required by section 15543, Title 5 of the California Code of Regulations. Currently, the required reserve is 5% of total operational expenditures.

Hold Harmless/Indemnification Provision (LAUSD-Specific Language)
A charter petition must include the following indemnification provision:

To the fullest extent permitted by law, the charter school does hereby agree, at its own expense, to indemnify, defend and hold harmless the LAUSD and the Board of Education and their members, officers, directors, agents, representatives, employees and volunteers from and against any and all claims, damages, losses and expenses including but not limited to attorney’s fees, brought by any person or entity whatsoever, arising out of, or relating to this charter agreement. The charter school further agrees to the fullest extent permitted by law, at its own expense, to indemnify, defend, and hold harmless the LAUSD and the Board of Education and their members, officers, directors, agents, representatives, employees and volunteers from and against any and all claims, damages, losses and expenses including but not limited to attorney’s fees, brought by any person or entity whatsoever for claims, damages, losses and expenses arising from or relating to acts or omissions of acts committed by the charter school, and their officers, directors, employees or volunteers. Moreover, MSCP agrees to indemnify and hold harmless the District for any contractual liability resulting from third party contracts with its vendors, contractors, partners or sponsors.

The MSCP will have a Health, Safety and Emergency Plan in place prior to beginning the operation of MSCP. MSCP will ensure that staff has been trained in health, safety, and emergency procedures and will maintain a calendar and conduct emergency response drills for students and staff. The MSCP, its employees and officers will comply with the Family Educational Rights and Privacy Act (FERPA) at all times. MSCP shall require all employees of the MSCP, and all volunteers who will be performing services that are not under the direct supervision of a Charter School employee, and any onsite vendors having unsupervised contact with students to submit to criminal background checks and fingerprinting. The Charter School will maintain on file and available for inspection evidence that the Charter School has performed criminal background checks for all employees and
documentation that vendors have conducted required criminal background checks for their employees prior to any unsupervised contact with students. The Charter School shall also ensure that it receives subsequent arrest notifications from the Department of Justice to ensure the ongoing safety of its students.

**Asbestos Management:**
MSCP shall occupy facilities that comply with the Asbestos requirement as cited in the Asbestos Hazard Emergency Response Act (AHERA), 40CFR part 763. AHERA requires that any building leased or acquired that is to be used as a school or administrative building shall maintain an asbestos management plan.

**Safe Auxiliary Services**
MSCP will require providers of auxiliary services to present proof of health and safety compliance before entering into a contract with such providers. Evidence must to be provided to the Executive Director.

**Mandated Child Abuse Reporting**
Pursuant to Penal Code section 11164 and 11166 all MSCP employees will be responsible for reporting suspected cases of child abuse to the appropriate authorities.

The reporter needs to only “reasonably suspect that abuse or neglect has occurred. The principal will provide profession development to make sure the entire staff understands the procedures for reporting child abuse. All staff will understand that they are mandated reporters and that failure to report is a misdemeanor punishable by law.

MSCP staff will immediately notify the Department of Children Services and/or the LAPD if there is suspicion of abuse. Further, the reporter will submit a written report of the incident to those same agencies. The reporting person will be responsible to provide all necessary information and reports to the proper investigating authorities.

If a child needs to be removed from the school based on the recommendation of DCS or law enforcement, MSCP will obtain the contact information of the agency person removing the student. This information will be available to the parent/guardian.
Element 7: Means to Achieve Racial/Ethnic Balance Reflective of District

Governing Law: The means by which the school will achieve racial and ethnic balance among its pupils that is reflective of the general population residing within the territorial jurisdiction of the school district to which the charter petition is submitted—California Education Code Section 47605 (b)(5)(G)

A. Outreach Efforts

MSCP will make every effort to recruit students of various racial and ethnic groups, so as to achieve a balance that is reflective of the general population residing within the boundaries of the Los Angeles Unified School District. Math and Science College Prep will be publicized on an on-going basis, with particular emphasis in the Koreatown community. The School’s Outreach Plan shall include, but is not necessarily limited to, the following strategies to ensure a racial and ethnic balance among students that is reflective of LAUSD’s demographics:

MSCP will begin to reach out to parents of potential students in the fall of 2011, utilizing local churches of various faiths and ethnic representation, earned media, directed web traffic, community forums, and middle school visits.

MSCP has already participated community events to provide information about the school and answer questions. MSCP will also be responsive to local media inquiries, providing information about the application and eligibility process.

MSCP will also work with counselors at local public and private middle schools to create awareness to parents. LAUSD middle schools that will be contacted include, but are not limited to: Berendo and Virgil Middle Schools.

For segments of parents that have historically been hard to reach, including single-parent homes, guardian-led homes, and families on public assistance, MSCP will make special outreach efforts. MSCP will advertise at places commonly used for child care and after-school programming, such as YMCAs and the Boys and Girls Clubs. MSCP will distribute information to local libraries as well. MSCP will also ask agencies providing public assistance to distribute school materials, including student applications.

Flyers will be posted at local grocery stores, after-school tutoring centers, churches, and libraries. Flyers will be posted in English and Spanish.

Parents will also be allowed to submit student applications online through the school’s website.

B. Geographic Target Area

MSCP will recruit primarily in the Korea Town and Mid-Wilshire region of Los Angeles.

C. Outreach Languages

MSCP will produce recruiting materials in English, Spanish, and Korean representative languages of the school’s target area.

D. Efforts for a LAUSD Reflective Population

The Koreatown/Mid-Wilshire area of Los Angeles is primarily comprised of the following ethnic/racial groups: Latinos, Asians, African-Americans, and Filipinos. By targeting recruitment efforts in the local community, reaching out to churches of all faiths and racial makeup, and working with community and business leaders of various ethnic groups, MSCP will successfully recruit a student body that is reflective of the demographics of Koreatown/Mid-Wilshire region on Los Angeles. MSCP will be cognizant to not focus solely on a particular subgroup. MSCP will diligently reach out to all groups, using multiple languages when appropriate.
No Child Left Behind—Public School Choice (NCLB-PSC) Traveling Students (LAUSD-Specific Language)

The District and charter school are committed to providing all students with quality educational alternatives in compliance with all federal and state laws, including students who are enrolled in schools of the District identified by the California Department of Education as in need of Program Improvement. Public School Choice ("NCLB-PSC") placement with charter schools is an alternative strongly encouraged by the No Child Left Behind Act of 2001 ("NCLB"). The charter school agrees to discuss with the District the possibility of accepting for enrollment District students participating in the District’s NCLB-PSC program. The parties agree to memorialize separately any agreed-to number of NCLB-PSC placements of District students at the school.

As required under NCLB, all NCLB-PSC students attending charter school shall have the right to continue attending charter school until the highest grade level of the charter. However, the obligation of the District to provide transportation for a NCLB-PSC student to charter school shall end in the event the NCLB-PSC student’s resident District school exits Program Improvement status.

[Charter School] will ensure that all of its NCLB-PSC students are treated in the same manner as other students attending the Charter School. NCLB-PSC students are and will be eligible for all applicable instructional and extra-curricular activities at the Charter School. Charter School will make reasonable efforts to invite and encourage the participation of the parents of NCLB-PSC students in the activities and meetings at the Charter School.

Determination of student eligibility for this NCLB-PSC option, including the grade level of eligibility, will be made solely by the District, based on the District’s NCLB-PSC process, guidelines, policies and the requirements of NCLB. In the event demand for places at [charter school] under the NCLB-PSC program increases in subsequent years, [charter school] agrees to discuss with the District the possibility of increasing the number of NCLB-PSC places available at the Charter School.

Federal Compliance (LAUSD-Specific Language)

As a recipient of federal funds, including federal Title I, Part A funds, MSCP has agreed to meet all of the programmatic, fiscal and other regulatory requirements of the No Child Left Behind Act of 2001 (NCLB) and other applicable federal grant programs. MSCP understands that it is a local educational agency [LEA] for purposes of federal compliance and reporting purposes. MSCP agrees that it will keep and make available to the District any documentation necessary to demonstrate compliance with the requirements of NCLB and other applicable federal programs, including, but not limited to, documentation related to funding, required parental notifications, appropriate credentialing of teaching and paraprofessional staff, the implementation of Public School Choice and Supplemental Educational Services, where applicable, or any other mandated federal program requirement. The mandated require elements of NCLB, Title I, Part A include, but are not limited to, the following:

- Notify parents at the beginning of each school year of their “right to know” the professional qualifications of their child’s classroom teacher including a timely notice to each individual parent that the parent’s child has been assigned, or taught for four or more consecutive weeks by, a teacher who is not highly qualified
- Develop jointly with, and distribute to, parents of participating children, a school-parent compact
- Hold an annual Title I meeting for parents of participating Title I students
- Develop jointly with, agree on with, and distribute to, parents of participating children a written parent involvement policy
- Submit biannual Consolidated Application to California Department of Education (CDE) requesting federal funds
- Complete and submit Local Education Agency (LEA) Plan to CDE
- Complete reform planning process with stakeholders and submit to CDE all appropriate documents for Title I schoolwide status, if applicable; otherwise, identify and maintain roster of eligible students for the Title I Targeted Assistance School Program
- Maintain inventory of equipment purchased with categorical funds, where applicable; and
- Maintain appropriate time-reporting documentation, including semi-annual certification and personnel activity report, for staff funded with categorical resources, where applicable
MSCP also understands that as part of its oversight of the Charter School, the District may conduct program review of federal and state compliance issues.

**Court-ordered Integration (LAUSD-Specific Language)**
The Charter School shall comply with all requirements of the Crawford v. Board of Education, City of Los Angeles court order and the LAUSD Integration Policy adopted and maintained pursuant to the Crawford court order, by the Office of Student Integration Services (collectively the “Court-ordered Integration Program”). The Court-ordered Integration Program applies to all schools within or chartered through LAUSD. The School will provide a written plan in the charter petition and upon further request by the District outlining how it would achieve and maintain the LAUSD’s ethnic goal of 70:30 or 30:70 ratio.

The District receives neither average daily attendance allocations nor Court-ordered Integration Program cost reimbursements for charter school students. Instead, the District now receives the Targeted Instruction Improvement Grant (TIIG) for its Court-ordered Integration Program. The District retains sole discretion over the allocation of TIIG funding, where available, and cannot guarantee the availability of this Funding.
Element 8: Admission Requirements


McKinney-Vento Homeless Assistance Act
The Charter School will adhere to the provisions of the McKinney-Vento Homeless Assistance Act and ensure that each child of a homeless individual and each homeless youth has equal access to the same free, appropriate public education as provided to other children and youths. The Charter School will include specific information in their outreach materials, websites, at community meetings, open forums, and regional center meetings notifying parents that the school is open to enroll and provide services for all students which shall include a District standard contact number to access additional information regarding enrollment. A student’s IEP will never be required prior to participation in any attendance lottery or as a condition for enrollment.

A. Non-Discrimination Statement

Charter schools are schools of choice. The Math and Science College Prep shall admit all pupils who wish to attend the School up to capacity. No test or assessment shall be administered to students prior to acceptance and enrollment into the school. Except as provided in Education Code Section 47605(d)(2), admission to Math and Science College Prep shall not be determined according to the place of residence of the pupil, or of his or her parent or guardian, within this State.

Math and Science College Prep will actively recruit a socio-economically and ethnically diverse student population from the District and surrounding areas who are committed to the school’s educational philosophy and instructional practices. MSCP will abide by all state and federal laws regarding admissions. MSCP will not discriminate against any student on the basis of race, sex, sexual orientation, religion, ethnicity, national origin, gender, disability, or any other protected classification.

Math and Science College Prep will abide by all state and federal guidelines regarding admissions and enrollment procedures, and the No Child Left Behind Act (NCLB). As permissible under AB 544, MSCP will also, when possible, give preference to students who already have a sibling attending MSCP in order to preserve family continuity.

B. Admissions Requirements

Student enrollment will be open to all incoming 9th graders. Math and Science College Prep will place no restrictions relating to prior academic or behavior records, other than the successful completion of 8th grade. MSCP will not require parents to commit to performing a set number of “voluntary” hours in order for their child to attend the school. However, parents of enrolled students will be strongly encouraged to be participants in their children’s education. Every effort will be made to make parents feel welcome at the school and to engage them in a meaningful way. All students will take diagnostic tests prior to the beginning of classes. This will allow MSCP to know its incoming students’ proficiency levels, and will allow MSCP to track its educational program’s value-added to of all its students.

C. Application Process

The application process is comprised of the following:
- Optional Parent/guardian attendance at a school informational session;
- Completion of a student enrollment form;

Once enrolled, the following will be collected for registration:
- Proof of immunizations;
- Home Language Survey; and
- Completion of Emergency Medical Information Form.

1. Applications will be accepted during a publicly advertised open enrollment period each winter through spring for enrollment in the following school year. Following the open enrollment period each year,
applications shall be counted to determine whether any grade level has received more applications
than availability. In the event that this happens, Math and Science College Prep will hold a public
random drawing to determine enrollment for the impacted grade level, with the exception of existing
students (2nd year forward) who are guaranteed enrollment in the following school year. All
individuals who have contacted Math and Science College Prep regarding enrollment will be notified
of the time and place of the lottery and will be encouraged to attend. All prospective students who
have completed the enrollment process will have their names entered into the lottery. Names will be
drawn at random until the grade level is filled.

2. Once a grade level is drawn to capacity, applications will continue to be drawn for position on a wait
list. This wait list will allow students the option of enrollment in the case of an opening during the
school year. In no circumstance will a wait list carry over to the following school year.

Math and Science College Prep agrees to adhere to applicable state and federal laws governing the
privacy and confidentiality of pupil records. In order to ensure continuity of record keeping, the
sponsoring district will provide Math and Science College Prep upon request, complete copies of the
cumulative records of the students who attend Math and Science College Prep. Upon leaving Math and
Science College Prep, student records will be processed accordingly and shared with the student's new
school district. Math and Science College Prep will adhere to all admissions regulations as mandated in
AB 544.

Math and Science College Prep will comply with the McKinney-Vento Homeless Assistance Act for
homeless children.

D. Efforts to Recruit Low Achieving and Economically Disadvantaged Students

The Koreatown/Mid-Wilshire region of Los Angeles has an unusually high percentage of children living in
foster care. MSCP wants to serve these students, as they have typically not performed well in traditional,
big comprehensive high schools. MSCP is uniquely set up to better serve this population because of
small class sizes, individualized learning programs, and a much smaller student body than most local
high schools. MSCP will reach out to foster care homes, placement agencies, and foster parent groups
to specifically recruit this group of students.

MSCP will also work with counselors at local public and private middle schools to create awareness to
parents.

For segments of parents that have historically been hard to reach, including single-parent homes,
guardian-led homes, and families on public assistance, MSCP will make special outreach efforts. MSCP
will advertise at places commonly used for child care and after-school programming, such as YMCAs and
the Boys and Girls Clubs. MSCP will distribute information to local libraries as well. MSCP will also ask
agencies providing public assistance to distribute school materials, including student applications.

Flyers will be posted at local grocery stores, after-school tutoring centers, churches, and libraries.

E. Lottery

In the event of that MSCP receives more student enrollment applications than seats available at the
school, MSCP will comply with state law and hold a public lottery to randomly select the student body.

Method to communicate rules
At the lottery, a presentation will be made in English, Spanish, and Korean to all interested parties about
the lottery process and rules. Collateral will also be given to each interested party.

Method to verify lottery procedures are fair
Each applicant’s name will be assigned a number. Each number will be put on a card. Each card will be
equal in size and shape. The card will then be put into a container or lottery device that will randomly mix
all cards. A random drawing will occur, and the first 145 numbers chosen are accepted to the school.
**Timeline for open enrollment and lottery**
MSCP anticipates that the open enrollment period will occur during the spring of 2012, with the lottery taking place (if necessary), no later than June 25<sup>th</sup>, 2012. In subsequent years, the open enrollment period will begin in the winter prior to the spring lottery.

**Location of lottery**
The lottery will be held in a large community center, church, auditorium, or any public venue capable of seating all applicants comfortably.

**Date and time of lottery**
The lottery, if necessary, will take place on April 12<sup>th</sup>, 2012 in the first year.

**Preferences to be granted**
Preferences will be granted to siblings and/or students that share a common home address. Preference shall extend to students who reside in LAUSD pursuant to Ed. Code section 47605(d)(2)(B).

**Procedures for wait list priorities**
Once the student list has been set, a waiting list will be developed for those students still wishing to enroll should space become available. Waitlist ranking will be assigned in the order selected. Two separate observers will collect lottery cards and enter into an electronic database the results. The database will be doubled checked to the physical cards to ensure accuracy.

**Notifying parents and timeline for securing admissions**
Results will also be mailed to all applicants within 24 hours of the lottery. Follow-up phone calls will also be made within 24 hours of the lottery. Winning parents/guardians will have 10 days from notification to accept enrollment. If parents do not respond within 10 days, MSCP will move to the wait list in the order of the lottery drawing.

**School records of lottery**
All lottery cards and databases will be kept on file by MSCP. During the school year, if vacancies should arise, the school will pull from the wait list.
Element 9: Financial and Programmatic Audit

_Governing Law:_ “The manner in which annual, independent financial audits shall be conducted. These audits shall employ generally accepted accounting principles, and the manner in which audit exceptions and deficiencies shall be resolved to the satisfaction of the chartering authority.” California Education Code 47605 (b)(5)(l)

A. Audit Assurances

Math and Science College Prep will be a fiscally independent, direct-funded charter school. A system of internal controls will be instituted and maintained by the Math and Science College Prep Executive Director with assistance of the business services consultant. The Executive Director will be responsible for contracting with and overseeing an independent audit by an accountant certified by the State of California with knowledge of school budget and accounting procedures. The audit will be performed annually. Before signing the contract agreement, the Executive Director must receive approval from the Board of Directors, as per Board policy. This audit will be conducted according to generally accepted accounting practices (GAAP) to verify the accuracy of the school’s financial statements, attendance, and enrollment accounting principles and to review the school’s internal controls. Audit exceptions and deficiencies will be resolved in conference with auditing agency prior to the completion of the auditor’s final report. The Finance Subcommittee of the Math and Science College Prep Board of Directors will participate in the audit process along with the Executive Director.

B. Systems to Provide Information

Math and Science College Prep will utilize attendance accounting procedures that will satisfy requirements for LAUSD, LACOE and CDE. This includes reporting enrollment and attendance figures to LAUSD on a monthly basis. Math and Science College Prep will utilize a carefully selected student information system (SIS), likely Power School, for attendance recording.

Math and Science College Prep will contract with a back office provider, such as ExEd, for most accounting procedures in the first two years of operations. These contractors, along with the Executive Director, will provide financial information needed for an audit. Appropriate accounting procedures will be implemented by MSCP to provide thorough and accurate information.

C. Reporting to LAUSD

Math and Science College Prep will provide LAUSD with the final audit results within 60 days of completion of the audit report. Audit exceptions and deficiencies in the final report will be resolved to the satisfaction of LAUSD.

Math and Science College Prep will submit the following reports to LAUSD:

- Provisional Budget - May 15 of the budget fiscal year
- Final Budget - July 1 of the budget fiscal year
- First Interim Projections - December 15 of operating fiscal year
- Second Interim Projections - March 15 of operating fiscal year
- Unaudited Actuals - July 15 following the end of the fiscal year
- Classification Report - monthly the Monday after close of the last day of the school month
- Statistical Report - monthly the Friday after the last day of the school month. In addition:
  - P1, first week of January
  - P2, the first week of May
- Bell Schedule - annually by November 1
  - Audited Financial Statements – December 15 (also to State Controller, State Department of Education and County Superintendent of Schools)
- Other reports requested by LAUSD
Math and Science College Prep shall promptly respond to all reasonable inquiries from the District, including but not limited to inquiries regarding financial records, and shall consult with the District regarding any inquiries.

District Oversight Costs (LAUSD-Specific Language)
The District may charge for the actual costs of supervisory oversight of Math and Science College Prep not to exceed 1% of the charter school’s revenue, or the District may charge for the actual costs of supervisory oversight of Math and Science College Prep not to exceed 3% if Math and Science College Prep is able to obtain substantially rent free facilities from the District. Notwithstanding the foregoing, the District may charge the maximum supervisory oversight fee allowed under the law, as it may change from time to time. The supervisory oversight fee provided herein is a separate and distinct from the charges arising under the charter school/facilities use agreements.

Balance Reserves
Additionally, the Charter School will at all times maintain a funds balance (reserve) of its expenditures as required by section 15450, Title 5 of the California Code of Regulations.

Special Education Revenue Adjustment/Payment for Services (LAUSD-Specific Language)
In the event that the Charter School owes funds to the District for the provision of agreed upon or fee for service or special education services or as a result of the State’s adjustment to allocation of special education revenues from the Charter School, the Charter School authorizes the District to deduct any and all of the in lieu property taxes that the Charter School otherwise would be eligible to receive under section 47635 of the Education Code to cover such owed amounts. The Charter School further understands and agrees that the District shall make appropriate deductions from the in lieu property tax amounts otherwise owed to the Charter School. Should this revenue stream be insufficient in any fiscal year to cover any such costs, the Charter School agrees that it will reimburse the District for the additional costs within forty-five (45) business days of being notified of the amounts owed.

Audit and Inspection of Records (LAUSD-Specific Language)
The Charter School agrees to observe and abide by the following terms and conditions as a requirement for receiving and maintaining their charter authorization:

- Charter School is subject to District oversight.
- The District’s statutory oversight responsibility continues throughout the life of the Charter and requires that it, among other things, monitors the fiscal condition of the Charter School.
- The District is authorized to revoke this Charter for, among other reasons, the failure of the Charter School to meet generally accepted accounting principles or if it engages in fiscal mismanagement.

Accordingly, the District hereby reserves the right, pursuant to its oversight responsibility, to audit the Charter School books, records, data, processes and procedures through the District Office of the Inspector General or other means. The audit may include, but is not limited to, the following areas:

- Compliance with terms and conditions prescribed in the Charter agreement,
- Internal controls, both financial and operational in nature,
- The accuracy, recording and/or reporting of the Charter School’s financial information,
- The Charter School’s debt structure,
- Governance policies, procedures and history,
- The recording and reporting of attendance data,
- The Charter School’s enrollment process,
- Compliance with safety plans and procedures, and
- Compliance with applicable grant requirements.

The Charter School shall cooperate fully with such audits and shall make available any and all records necessary for the performance of the audit upon 30 days notice to Charter School. When 30 days notice may defeat the purpose of the audit, the District may conduct the audit upon 24-hours notice. Audit exceptions and deficiencies shall be resolved to the satisfaction of LAUSD.

MSCP will develop and maintain internal fiscal control policies governing all financial activities.
Element 10: Pupil Suspension and Expulsion

**Governing Law:** “The procedures by which pupils can be suspended or expelled”—California Education Code Section 47605 (b)(5)(J)

**Suspensions and Expulsions (LAUSD-Specific Language)**
Charter School shall provide due process for all students, including adequate notice to parents/guardians and students regarding the grounds for suspension and expulsion and their due process rights regarding suspension and expulsion, including rights to appeal.

Charter School shall ensure that its policies and procedures regarding suspension and expulsion will be periodically reviewed, and modified as necessary, including, for example, any modification of the lists of offenses for which students are subject to suspension or expulsion.

Charter School shall ensure the appropriate interim placement of students during and pending the completion of the Charter School’s student expulsion process.

Charter Schools will implement operational and procedural guidelines ensuring federal and state laws and regulations regarding the discipline of students with disabilities are met. Charter Schools will also ensure staff is knowledgeable about and complies with the District’s Discipline Foundation Policy. If the student receives or is eligible for special education, the Charter School shall identify and provide special education programs and services at the appropriate interim educational placement, pending the completion of the expulsion process, to be coordinated with the LAUSD Support Unit, Division of Special Education.

Charter School shall utilize alternatives to suspension and expulsion with students who are truant, tardy, or otherwise absent from compulsory school activities.
If a student is expelled from the Charter School, the Charter School shall forward student records upon request of the receiving school district in a timely fashion. Charter School shall also submit an expulsion packet to the Innovation and Charter Schools Division immediately or as soon as practically possible, containing:

- pupil’s last known address
- a copy of the cumulative record
- transcript of grades or report card
- health information
- documentation of the expulsion proceeding, including specific facts supporting the expulsion
- student’s current educational placement
- copy of parental notice expulsion
- copy of documentation of expulsion provided to parent stating reason for expulsion, term of expulsion, rehabilitation plan, reinstatement notice with eligibility date and instructions for providing proof of student’s compliance for reinstatement, appeal process and options for enrollment; and
- if the student is eligible for Special Education, the Charter School must provide documentation related to expulsion pursuant to IDEA including conducting a manifestation determination IEP prior to expulsion. If the student is eligible for Section 504 Accommodations, the Charter School must provide evidence that it convened a Link Determination meeting to address two questions: A) Was the misconduct caused by, or directly and substantially related to the students disability: B) Was the misconduct a direct result of the Charter School’s failure to implement 504 Plan?

**Outcome Data**
Charter School shall maintain all data involving placement, tracking, and monitoring of student suspensions, expulsions, and reinstatements, and make such outcome data readily available to the District upon request.

**Rehabilitation Plans**
Pupils who are expelled from the Charter School shall be given a rehabilitation plan upon expulsion as developed by the Charter School’s governing board at the time of the expulsion order, which may include,
but is not limited to, periodic review as well as assessment at the time of review for readmission. The rehabilitation plan should include a date not later than one (1) year from the date of expulsion when the pupil may reapply to the Charter School for readmission.

Readmission
The Charter School’s governing board shall adopt rules establishing a procedure for the filing and processing of requests for readmission and the process for the required review of all expelled pupils for readmission. Upon completion of the readmission process, the Charter School’s governing board shall readmit the pupil, unless the Charter School’s governing board makes a finding that the pupil has not met the conditions of the rehabilitation plan or continues to pose a danger to campus safety. A description of the procedure shall be made available to the pupil and the pupil’s parent or guardian at the time the expulsion order is entered. The Charter School is responsible for reinstating the student upon the conclusion of the expulsion period.

Special Education Students
In the case of a student who has an Individualized Education Program (“IEP”), or a student who has a 504 Plan, the Charter School will ensure that it follows the correct disciplinary procedures to comply with the mandates of state and federal laws, including IDEA and Section 504 of the Rehabilitation Plan of 1973. As set forth in the MOU regarding special education between the District and the Charter School an IEP team, including a District representative, will meet to conduct a manifestation determination and to discuss alternative placement utilizing the District’s Policies and Procedures Manual. Prior to recommending expulsion for a student with a 504 Plan, the Charter School’s administrator will convene a Link Determination meeting to ask the following two questions:
   A) Was the misconduct caused by, or directly and substantially related to the student’s disability?
   B) Was the misconduct a direct result of the Charter School’s failure to implement 504?

Gun Free Schools Act
The Charter School shall comply with the federal Gun Free Schools Act

A. Qualifying Offenses

Suspension and Expulsion
A Pupil Suspension and Expulsion Policy will be established in order to promote learning and protect the safety and well being of all students at Math and Science College Prep. When the Policy is violated, it may be necessary to suspend or expel a student from regular classroom instruction. This policy shall serve as Math and Science College Prep’s policy and procedures for student suspension and expulsion and it may be amended from time to time without the need to amend the charter so long as the amendments comport with legal requirements.

Suspended or expelled students shall be excluded from all school and school-related activities unless otherwise agreed during the period of suspension or expulsion. Students will be provided all classroom assignments and related materials with the expectation that these assignments will be completed while on an extended suspension.

Grounds for Mandatory Suspension
- Possessed, sold, or otherwise furnished any knife, or other dangerous object.
- Possessed, sold or otherwise furnished, or been under the influence of any controlled substance, alcoholic beverage, or intoxicant of any kind.
- Offered, furnished, or sold any substitute substance represented as a controlled substance, or intoxicant of any kind.
- Committed or attempted to commit robbery or extortion.
- Stole or attempted to steal school or private property.
- Unlawfully possessed, offered, furnished, or sold any drug paraphernalia.
- Knowingly received stolen school or private property.
- Committed hate crimes.

Grounds for Discretionary Suspension
- Threatened, attempted, or caused physical injury to another person.
- Willfully used excessive force or violence upon the person of another, except in self-defense.
• Disrupted school activities or willfully defied the valid authority of school personnel.
• Was party to actions that caused the mandatory suspension of another student.
• Willfully damaged or vandalized school property.
• Committed an obscene act or engaged in habitual profanity or vulgarity.
• Committed sexual harassment.
• Possessed or used tobacco or any product containing tobacco or nicotine products, including clove cigarettes.

The above lists are not exhaustive and depending upon the offense, a student may be suspended for misconduct not specified above when such conduct warrants suspension.

Grounds for Mandatory Expulsion
• Possessed, sold, or otherwise furnished a firearm, explosive or other life-threatening weapon. (Federal Gun-Free Schools Act of 1994: expulsion for one calendar year for anyone who takes a gun to school.)
• Knowingly participated in activities that seriously endangered students, parents, or staff.
• Committed or attempted to commit sexual battery or sexual assault.
• Possessed, sold or otherwise furnished, or been under the influence of any controlled substance, alcoholic beverage, or intoxicant of any kind.
• Committed or attempted to commit robbery or extortion.
• Unlawfully possessed, offered, furnished, or sold any drug paraphernalia.

Grounds for Discretionary Expulsion
• Offered, furnished, or sold any substitute substance represented as a controlled substance, or intoxicant of any kind.
• Stolen or attempted to steal material school or private property.
• Knowingly received stolen school or private property.
• Repeated offences that would be grounds for suspension.

The above lists are not exhaustive and depending upon the offense, a student may be expelled for misconduct not specified above when such conduct warrants expulsion.

The Math and Science College Prep will comply with the federal Gun Free Schools Act of 1994.

A student will not be suspended or expelled for truancy or tardiness.

Suspension or Expulsion Alternatives
No student shall be immediately suspended or expelled for a first time offense, except in extreme cases enumerated above. Interventions shall be first attempted and will include family support team meetings, behavior modification plans and contracts. Additionally, alternatives to suspension or expulsion will first be attempted with pupils who are truant, tardy, or otherwise absent from assigned school activities. Tardies and truancies are dealt with through Math and Science College Prep attendance policy and are not in of themselves a student discipline issue.

B. Procedures for Suspension and Expulsion

Suspension from Class: A teacher-generated suspension from class is for the day of the act and the following meeting of the class. The teacher shall immediately report the suspension to the Principal, who will then report the suspension to the Executive Director. The pupil will be sent to an administrator for appropriate action, which may include suspension from school or other disciplinary measures.

Suspensions from school shall be initiated according to the following procedures:

• Conference
Suspension shall be preceded, if possible, by a conference conducted by the Principal or the Principal's designee with the student and his or her parent and, whenever practical, the teacher, supervisor or school employee who referred the student to Principal. The conference may be omitted if the Director/Principal or designee determines that an emergency situation exists. An "emergency situation" involves a clear and present danger to the lives, safety or health of students or school personnel. If a student is suspended without this conference, both the parent/guardian and student shall be notified of the student's right to return to school for the purpose of a conference.
At the conference, the pupil shall be informed of the reason for the disciplinary action and the evidence against him or her and shall be given the opportunity to present his or her version and evidence in his or her defense.

This conference shall be held within two school days, unless the pupil waives this right or is physically unable to attend for any reason including, but not limited to, incarceration or hospitalization. The decision to waive the conference will be made the parent/guardian if the student is a minor.

No penalties may be imposed on a pupil for failure of the pupil's parent or guardian to attend a conference with school officials. Reinstatement of the suspended pupil shall not be contingent upon attendance by the pupil's parent or guardian at the conference.

Length of Suspension
The length of suspension for students may not exceed a period of five (5) consecutive school days unless an administrative recommendation has been made and agreed to by the student's parent/guardian. If a student is recommended for a period of suspension exceeding five (5) consecutive school days, a second conference will be scheduled between the parent/guardian to discuss the progress of the suspension upon the completion of the fifth (5th) day of suspension. All reasonable arrangements will be made to provide the student with classroom material and current assignments to be completed at home during the length of the suspension.

Suspension Time Limits/Recommendation for Placement/Expulsion
Suspensions, when not including a recommendation for expulsion, shall not exceed five (5) consecutive school days per suspension. A student will be considered for expulsion after receiving suspensions totaling 20 days in a single school year.

Upon a recommendation of Placement/Expulsion by the Principal or Director/Principal’s designee, the pupil and the pupil's guardian or representative will be invited to a conference to determine if the suspension for the pupil should be extended pending an expulsion hearing. This determination will be made by the Principal or designee upon either of the following determinations: 1) the pupil's presence will be disruptive to the education process; or 2) the pupil poses a threat or danger to others. Upon either determination, the pupil's suspension will be extended pending the results of an expulsion hearing.

Suspension Appeal Process
The parent or guardian of a suspended student or the suspended student himself or herself may appeal the suspension decision within 5 working days directly to the Executive Director. The Principal will expeditiously review the case with the parent and/or student in question within 5 working days of receipt of the appeal. If the Executive Director determines that the student has not violated one of the rules in the student handbook as agreed to by the student and parent or believes that extenuating circumstances should mitigate the consequences of such an action, then the suspension decision may be reversed.

During the required parent conference, information is provided to the student and parent or guardian about their right to appeal a suspension, along with information about the appeal process.

- The Executive Director will gather information from the Principal, student, parent or guardian to determine whether or not the Principal suspended the student properly and followed all applicable procedures. The Executive Director will consider the reasons the family feels the suspension was incorrect or inappropriate, and may contact the family and/or school staff to clarify information.
- Based on the information submitted or requested, the Executive Director may make one of the following decisions regarding the suspension.
  - Uphold the suspension
  - Determine that the suspension was not within the school's guidelines, overturn the suspension, and order that all records and documents regarding the disciplinary proceeding be destroyed. No information regarding the suspension will be placed in the student's permanent record, or shared with anyone not directly involved in the proceedings.

The Principal will mail a copy of the decision to the student and/or parent or guardian within five days of the issuing the decision. A copy of the decision is also mailed to the school Principal.

Authority to Expel
A student may be expelled either by the Board following a hearing before it or by the Board upon the recommendation of an Administrative Panel to be assigned by the Board as needed. The Administrative
Panel should consist of at least three members who are certificated and neither a teacher of the pupil or a Board member of the School’s governing Board. The Administrative Panel may recommend expulsion of any student found to have committed an expellable offense.

**Expulsion Procedures**

Students recommended for expulsion are entitled to a hearing to determine whether the student should be expelled. Unless postponed for good cause, the hearing shall be held within thirty (30) school days after the Principal or designee determines that the Pupil has committed an expellable offense.

In the event an administrative panel hears the case, it will make a recommendation to the Board for a final decision whether to expel. The hearing shall be held in closed session unless the pupil makes a written request for a public hearing three (3) days prior to the hearing.

Written notice of the hearing shall be forwarded to the student and the student's parent/guardian at least ten (10) calendar days before the date of the hearing. Upon mailing the notice, it shall be deemed served upon the pupil. The notice shall include:

1. The date and place of the expulsion hearing;
2. A statement of the specific facts, charges and offenses upon which the proposed expulsion is based;
3. A copy of the School's disciplinary rules which relate to the alleged violation;
4. Notification of the student's or parent/guardian's obligation to provide information about the student's status at the school to any other school district or school to which the student seeks enrollment;
5. The opportunity for the student or the student's parent/guardian to appear in person or to employ and be represented by counsel or a non-attorney advisor;
6. The right to inspect and obtain copies of all documents to be used at the hearing;
7. The opportunity to confront and question all witnesses who testify at the hearing;
8. The opportunity to question all evidence presented and to present oral and documentary evidence on the student's behalf including witnesses.

**Special Procedures for Expulsion Hearings Involving Sexual Assault or Battery Offenses**

MSCP may, upon a finding of good cause, determine that the disclosure of either the identity of the witness or the testimony of that witness at the hearing, or both, would subject the witness to an unreasonable risk of psychological or physical harm. Upon this determination, the testimony of the witness may be presented at the hearing in the form of sworn declarations which shall be examined only by the School or the hearing officer. Copies of these sworn declarations, edited to delete the name and identity of the witness, shall be made available to the pupil.

1. The complaining witness in any sexual assault or battery case must be provided with a copy of the applicable disciplinary rules and advised of his/her right to (a) receive five days notice of his/her scheduled testimony, (b) have up to two (2) adult support persons of his/her choosing present in the hearing at the time he/she testifies, which may include a parent, guardian, or legal counsel, and (c) elect to have the hearing closed while testifying.
2. MSCP must also provide the victim a room separate from the hearing room for the complaining witness’ use prior to and during breaks in testimony.
3. At the discretion of the person or panel conducting the hearing, the complaining witness shall be allowed periods of relief from examination and cross-examination during which he or she may leave the hearing room.
4. The person conducting the expulsion hearing may also arrange the seating within the hearing room to facilitate a less intimidating environment for the complaining witness.
5. The person conducting the expulsion hearing may also limit time for taking the testimony of the complaining witness to the hours he/she is normally in school, if there is no good cause to take the testimony during other hours.
6. Prior to a complaining witness testifying, the support persons must be admonished that the hearing is confidential. Nothing in the law precludes the person presiding over the hearing from removing a support person whom the presiding person finds is disrupting the hearing. The person conducting
the hearing may permit any one of the support persons for the complaining witness to accompany him or her to the witness stand.

7. If one or both of the support persons is also a witness, the School must present evidence that the witness' presence is both desired by the witness and will be helpful to the School. The person presiding over the hearing shall permit the witness to stay unless it is established that there is a substantial risk that the testimony of the complaining witness would be influenced by the support person, in which case the presiding official shall admonish the support person or persons not to prompt, sway, or influence the witness in any way. Nothing shall preclude the presiding officer from exercising his or her discretion to remove a person from the hearing whom he or she believes is prompting, swaying, or influencing the witness.

8. The testimony of the support person shall be presented before the testimony of the complaining witness and the complaining witness shall be excluded from the courtroom during that testimony.

9. Especially for charges involving sexual assault or battery, if the hearing is to be conducted in the public at the request of the pupil being expelled, the complaining witness shall have the right to have his/her testimony heard in a closed session when testifying at a public meeting would threaten serious psychological harm to the complaining witness and there are no alternative procedures to avoid the threatened harm. The alternative procedures may include videotaped depositions or contemporaneous examination in another place communicated to the hearing room by means of closed-circuit television.

10. Evidence of specific instances of a complaining witness' prior sexual conduct is presumed inadmissible and shall not be heard absent a determination by the person conducting the hearing that extraordinary circumstances exist requiring the evidence be heard. Before such a determination regarding extraordinary circumstance can be made, the witness shall be provided notice and an opportunity to present opposition to the introduction of the evidence. In the hearing on the admissibility of the evidence, the complaining witness shall be entitled to be represented by a parent, legal counsel, or other support person. Reputation or opinion evidence regarding the sexual behavior of the complaining witness is not admissible for any purpose.

Record of Hearing
A record of the hearing shall be made and may be maintained by any means, including electronic recording, as long as a reasonably accurate and complete written transcription of the proceedings can be made.

Presentation of Evidence
While technical rules of evidence do not apply to expulsion hearings, evidence may be admitted and used as proof only if it is the kind of evidence on which reasonable persons can rely in the conduct of serious affairs. A recommendation by the Administrative Panel to expel must be supported by substantial evidence that the student committed an expellable offense. These may include: The date and place of the expulsion hearing, a statement of the specific facts, charges and offenses upon which the proposed expulsion is based, a copy of the School's disciplinary rules which relate to the alleged violation, copies of all documents to be used at the expulsion hearing, the opportunity to question all witnesses who testify at the hearing, and the opportunity to question all evidence presented and to present oral and documentary evidence on the student's behalf including witnesses.

Findings of fact shall be based solely on the evidence at the hearing. While hearsay evidence is admissible, no decision to expel shall be based solely on hearsay and sworn declarations may be admitted as testimony from witnesses of whom the Board, Panel or designee determines that disclosure of their identity or testimony at the hearing may subject them to an unreasonable risk of physical or psychological harm.

If, due to a written request by the expelled pupil, the hearing is held at a public meeting, and the charge is committing or attempting to commit a sexual assault or committing a sexual battery as defined in Education Code Section 48900, a complaining witness shall have the right to have his or her testimony heard in a session closed to the public.

The decision of the Administrative Panel shall be in the form of written findings of fact and a written recommendation to the Board who will make a final determination regarding the expulsion. The final decision by the Board shall be made within ten (10) school days following the conclusion of the hearing. The Decision of the Board is final.
If the expulsion hearing panel decides not to recommend expulsion, the pupil shall immediately be returned to his/her educational program.

**Appeal of Expulsion**

A request for appeal of expulsion must be received within five (5) working days after the written notice received by the parent/guardian. The student will be considered suspended until a meeting is convened. The appeal itself will occur within ten (10) working days after the written notice received by the parent/guardian, and must be attended by parent(s)/guardian(s). In the case of expulsion, a fair and impartial panel of representatives appointed by the Board of Directors will hear the appeal, and its decision will be final. The panel shall consist of at least three members who are certificated and neither a teacher of the pupil or a Board member of the School's governing Board. The Administrative Panel may recommend expulsion of any student found to have committed an expellable offense.

**C. Informing Parents**

**Suspension Notice to Parents/Guardians**

At the time of the suspension, an administrator or designee shall make a reasonable effort to contact the parent/guardian by telephone or in person. Whenever a student is suspended, the parent/guardian shall be notified in writing of the suspension and the date of return following suspension. This notice shall state the specific offense committed by the student. In addition, the notice may also state the date and time when the student may return to school. If school officials wish to ask the parent/guardian to confer regarding matters pertinent to the suspension, the notice may request that the parent/guardian respond to such requests without delay. The written notice may request a meeting with the parent/guardian to discuss the causes and the duration of the suspension.

**Written Notice to Expel**

The Principal or designee following a decision of the Board to expel shall send written notice of the decision to expel, including the Board's adopted findings of fact, to the student or parent/guardian. This notice shall also include the following:

- Notice of the specific offense committed by the student
- Notice of the student's or parent/guardian's obligation to inform any new district in which the student seeks to enroll of the student's status with the School.

The Principal or designee shall send a copy of the written notice of the decision to expel to the District.

This notice shall include the following:

- The student's name
- The specific expellable offense committed by the student

Additionally, in accordance with Education Code Section 47605(d)(3), upon expulsion of any student, the Charter School shall notify the superintendent of the school district of the pupil’s last known address within 30 days, and shall, upon request, provide that school district with a copy of the cumulative record of the pupil, including a transcript of grades or report card and health information.

**D. Evidence of Research**

MSCP researched other LAUSD public high schools\(^{21}\) and a variety of academic studies\(^{22}\) before developing this charter petition\(^{23}\).

**E. General Discipline Policy**

\(^{21}\) [http://soces.lausd.kl2.ca.us/about/rules/discipline.htm](http://soces.lausd.kl2.ca.us/about/rules/discipline.htm)

\(^{22}\) [http://idea.gseis.ucla.edu/publications/suspension/index.html](http://idea.gseis.ucla.edu/publications/suspension/index.html)

\(^{23}\) [http://notebook.lausd.net/pls/ptl/docs/PAGE/CA_LAUSD/FLDR_ORGANIZATIONS/STUDENT_HEALTH_HUMAN_SERVICES/SHHS/DISCIPLELINE_POLICY/BUL-3638.0.PDF](http://notebook.lausd.net/pls/ptl/docs/PAGE/CA_LAUSD/FLDR_ORGANIZATIONS/STUDENT_HEALTH_HUMAN_SERVICES/SHHS/DISCIPLELINE_POLICY/BUL-3638.0.PDF)
Students learn best in an environment where there are clear expectations about behavior, and when the culture of the school values and respects all stakeholders.

In order to maintain a positive learning environment, Math and Science College Prep staff will develop by June 1, 2012 a comprehensive set of student discipline policies through the work of a committee that includes all interested parents, guardians, students, and staff and is in accordance with California Education Code Section 48900. The Math and Science College Prep student discipline policy and procedures for suspension and expulsion shall include positive behavioral interventions. These policies will be distributed in the school’s student handbook and will describe the school’s expectations regarding mutual respect, safety, personal responsibility, work habits, attendance, violence, and substance abuse. Each family will receive a copy of these policies and be required to verify that they have reviewed them with their children at the time of enrollment or at the beginning of the school year.

The discipline policy developed by the Math and Science College Prep staff will not be discriminatory or arbitrary. The process will follow general principles of due process. Students will sign agreements related to their understanding of and responsibility to the standards set forth in the discipline policy within the handbook. Students who do not live up to their responsibilities and who violate the school rules may expect some consequences for their behavior, such as:

- Warning
- Loss of Privileges
- Notices to parents by telephone or letter
- Referral to the administrator
- Request for parent conference
- In-school suspension
- Suspension
- Expulsion

A student may be suspended or expelled for any of the acts enumerated in this section that are related to school activity or school attendance that occur at any time, including, but not limited to, the following:

- While on school grounds.
- While going to or coming from school.
- While using school-owned computers and servers.
- During the lunch period whether on or off the campus.
- During, or while going to or coming from, a school-sponsored activity.

Prior to suspension/expulsion proceedings, a Student Success Team will be formed of involved teachers, parents, and the Principal to support the student in the improvement of his/her behavior. The SST will meet with the student’s advisor as needed on Early Dismissal Days to discuss specific modifications and intervention strategies for the student to follow. The advisor will update the student’s ILP according to the goals set in these SST meetings. Student behavior will be monitored with the expectation that the student will comply with the plan. Students who habitually fail to comply with these policies and/or who present an immediate threat to health and safety may be suspended.

Math and Science College Prep staff shall enforce disciplinary rules and procedures fairly and consistently among all students. This Policy and its Procedures will be printed and distributed as part of the Student Handbook and will clearly describe discipline expectations.

Discipline includes, but is not limited to, advising and counseling students, conferring with parents/guardians, detention during and after school hours, use of alternative educational environments, suspension and expulsion.

Corporal punishment shall not be used as a disciplinary measure against any student. Corporal punishment includes the willful infliction of or willfully causing the infliction of physical pain on a student. For purposes of the Policy, corporal punishment does not include an employee’s use of force that is reasonable and necessary to protect the employee, students, staff or other persons or to prevent damage to school property.

The Math and Science College Prep administration shall ensure that students and their parents/guardians are notified in writing upon enrollment of all discipline policies and procedures. The notice shall state that these Policy and Administrative Procedures are available on request at the Director/Principal's office.
Disciplinary Records
The School shall maintain the confidentiality of Pupil Records of all student suspensions and expulsions in locked files at the School. These files will only be accessible to the Executive Director, Principal, and any staff members providing services to the students. Signatures will be required of those utilizing the confidential files. Such records shall be made available to the District upon request.

Expelled Pupils/Alternative Education
In the event of a decision to expel a student from Math and Science College Prep, the school administration will work cooperatively with the district of residence, county, and/or private schools to assist with the appropriate educational placement of the student who has been expelled.

If a student is under an expulsion order from another school district (LEA), all information must be provided to the Math and Science College Prep Board of Directors for review. The MSCP Board of Directors will determine if enrollment will be granted.
Element 11: Retirement System

Governing Law: The manner by which staff members of Math and Science College Prep will be covered by the State Teachers’ Retirement System, the Public Employees’ Retirement System, or federal social security. “Ed. Code 47605 (b)(5)(k)

A. Retirement Systems

MSCP will make participation in State Teachers’ Retirement System (STRS) available to teachers and a 403b available to classified persons working at the school. MSCP will make any contribution that is legally required of the employer, including STRS, 403b, social security, and unemployment insurance. All withholdings from employees and the charter school will be forwarded to the STRS fund as required.

Staff Retirement Allocations

1. STRS: All certificated personnel including teachers, Principal, and guidance counselor
2. Classified staff will be offered a 403b
3. Federal Social Security: Classified staff, including the Executive Director, Administrative Assistants, Front Desk/Registrar

B. Responsible Staff Member

The Executive Director is responsible for ensuring that appropriate arrangements for the aforementioned coverage will be made with approval of the Board.

C. STRS Reporting

MSCP will submit all retirement data through LACOE and will comply with all policies and procedures for payroll reporting. Employees will accumulate service credit years in the same manner as all other members of STRS. The Math and Science College Prep Executive Director shall be solely responsible for ensuring that such retirement coverage is arranged and shall forward any required payroll deductions and related data to LACOE as required by Education Code Section 47611.3.
Element 12: Attendance Alternatives

**Governing Law:** The public school attendance alternatives for pupils residing within the school district who choose not to attend charter schools. – Education Code Section 47605(b)(5)(L)

A. Attendance Alternatives (LAUSD-Specific Language)

Pupils who choose not to attend MSCP may choose to attend other public schools in their district of residence or pursue an interdistrict-transfer in accordance with existing enrollment and transfer policies of the district.

B. Parent Notification

Parents and guardians of each student enrolled in MSCP will be informed on admissions forms that the students have no right to admission in a particular school of a local education agency as a consequence of enrollment in MSCP, except to the extent that such a right is extended by the local education agency. If space is available, traveling students will have the option to attend.

C. Governing Board Shall Not Require Charter Enrollment

MSCP recognizes that the governing School Board of LAUSD may not require any student to attend MSCP.

- The address of Math and Science College Prep is to be determined but in the Koreatown area of L.A.
- The phone number of Math and Science College Prep is to be determined.
- The contact person for Math and Science College Prep is Emilio Pack.
- The number of rooms at Math and Science College Prep is to be determined.
- The grade configuration is 9th through 12th grade.
- The number of students in the first year will be 145.
- The grade level(s) of the students the first year will be 9th grade.
- The opening date of Math and Science College Prep is August 13, 2012.
- The admission requirements include: completion of home language survey, immunizations, and emergency contact information.
- The operational capacity will be 500 students.
- The instructional calendar will be 190 days.
- The bell schedule for the charter school will be:

<table>
<thead>
<tr>
<th>Monday &amp; Tuesday (odd); Thursday &amp; Friday (even)</th>
<th>Instructional Periods 120 minutes per class 40 minute advisory</th>
<th>Minutes Daily 400</th>
<th>Wednesdays-Shortened Day for Professional Development</th>
<th>Instructional Periods 50 minutes per class No Advisory</th>
<th>Minutes 300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisory</td>
<td>7:45 a.m. – 8:25 a.m.</td>
<td>40 +5</td>
<td>Period 1</td>
<td>7:45 a.m. – 8:35 a.m.</td>
<td>50 +3</td>
</tr>
<tr>
<td>Period 1/2</td>
<td>8:30 a.m. – 10:30 a.m.</td>
<td>120</td>
<td>Period 2</td>
<td>8:38 a.m. – 9:28 a.m.</td>
<td>50 +3</td>
</tr>
<tr>
<td>Nutrition</td>
<td>10:30 a.m. – 10:50 a.m.</td>
<td>20 +5</td>
<td>Period 3</td>
<td>9:31 a.m. – 10:21 a.m.</td>
<td>50 +3</td>
</tr>
<tr>
<td>Period 3/4</td>
<td>10:55 a.m. – 12:55 p.m.</td>
<td>120</td>
<td>Period 4</td>
<td>10:24 a.m. – 11:14 a.m.</td>
<td>50</td>
</tr>
<tr>
<td>Lunch</td>
<td>12:55 p.m. – 1:25 p.m.</td>
<td>30 +5</td>
<td>Lunch</td>
<td>11:14 a.m. – 11:44 p.m.</td>
<td>30 +3</td>
</tr>
<tr>
<td>Period 5/6</td>
<td>1:30 p.m. – 3:30 p.m.</td>
<td>120</td>
<td>Period 5</td>
<td>11:47 p.m. – 12:37 p.m.</td>
<td>50 +3</td>
</tr>
<tr>
<td>Period 6</td>
<td></td>
<td></td>
<td>Period 6</td>
<td>12:40 p.m. – 1:30 p.m.</td>
<td>50</td>
</tr>
<tr>
<td>Prof. Development</td>
<td>1:30 p.m. – 3:30 p.m.</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Element 13: Description of Employee Rights

Governing Law: A description of the rights of any employee of the school district upon leaving the employment of the school district to work in a charter school, and of any rights of return to the school district after employment at a charter school. – Education Code Section 47605(b)(5)(M)

A. Rights of District Employees

Leave and return rights for union-represented employees who accept employment with the Charter School will be administered in accordance with applicable collective bargaining agreements between the employee’s union and the District and also in accordance with any applicable judicial rulings.

B. Rights to Return

All provisions pertaining to leave and return rights for District union employees will be granted to certificated and classified employees in accordance with current collective bargaining agreements.

C. Other Rights

District employees who have left employment in the District to work at Math and Science College Prep shall not have any right to return to the District, except as agreed upon by the District at its discretion in accordance with District Board Policy and applicable collective bargaining agreements. Such former District employees shall also not continue to earn service credit in LAUSD while employed by Math and Science College Prep, unless the District otherwise provides.

Employees of the District who choose to leave the employment of the District to work in the Charter School shall have no automatic rights of return to the District after employment at the Charter School unless specifically granted by the District through a leave of absence or other agreement or policy of the District as aligned with the collective bargaining agreements of the District. All provisions pertaining to leave and return rights for District union employees will be granted to certificated and classified employees in accordance with current collective bargaining agreement.

Former District employees must consult with the District to determine their eligibility for leave.

UTLA represented employees who chose to work at a start-up Charter School are governed by Article XII-B, Section 1.0 (b): Employees of Start-Up Charters. Employees may qualify for personal leaves of absence under Article XII, Section 17.0, Personal Leave (Unpaid), which grants an unpaid leave to permanent employees for a period not to exceed 52 consecutive calendar weeks.

Leave for classified employees and Teacher Assistants shall be for a minimum of one year. The leave shall be extended upon request of the employee; however, the total period of leave shall not exceed the duration of the initial charter.
Element 14: Dispute Resolution Procedures

Governing Law: The procedures to be followed by The Math and Science College Prep and the entity granting the charter to resolve disputes relating to provisions of the charter—California Education Code Section 47605(b)(5)(N)

A. Mandatory Dispute Resolution (LAUSD-Specific Language) Provisions

The staff and governing Board members of Math and Science College Prep agree to resolve any claim, controversy, or dispute arising out of or relating to the Charter agreement between the District and MSCP, except and controversy or claim that is in any way related to revocation of this Charter, (“Dispute”) pursuant to the terms of this Element 14.

Any dispute between the District and Math and Science College Prep shall be resolved in accordance with the procedures set forth below:

(1) Any dispute shall made in writing (“Written Notification”). The Written Notification must identify the nature of the dispute and any supporting facts. The Written Notification may be tendered by personal delivery, by facsimile, or by certified mail. The Written Notification shall be deemed received (a) if personally delivered, upon date of delivery to the address of the person to receive such notice if delivered by 5:00 PM or otherwise on the business day following personal delivery; (b) if by facsimile, upon electronic confirmation of receipt; or (c) if by mail, two (2) business days after deposit in the U.S. Mail. All written notices shall be addressed as follows:

To Charter School: Math and Science College Prep

c/o School Director

To Director of Charter Schools: Director of Charter Schools
Los Angeles Unified School District
333 South Beaudry Avenue, 20th Floor
Los Angeles, California 90017

(2) A written response (“Written Response”) shall be tendered to the other party within twenty (20) business days from the date of receipt of the Written Notification. The parties agree to schedule a conference to discuss the claim or controversy (“Issue Conference”). The Issue Conference shall take place within fifteen (15) business days from the date the Written Response is received by the other party. The Written Response may be tendered by personal delivery, by facsimile, or by certified mail. The Written Response shall be deemed received (a) if personally delivered, upon date of delivery to the address of the person to receive such notice if delivered by 5:00 p.m., or otherwise on the business day following personal delivery; (b) if by facsimile, upon electronic confirmation of receipt; or (c) if by mail, two (2) business days after deposit in the U.S. Mail.

B. Costs of Dispute Resolution

(3) If the controversy, claim, or dispute cannot be resolved by mutual agreement at the Issue Conference, then either party may request that the matter be resolved by mediation. Each party shall bear its own costs and expenses associated with the mediation. The mediator’s fees and the administrative fees of the mediation shall be shared equally among the parties. Mediation proceedings shall commence within 120 days from the date of the Issue Conference. The parties shall mutually agree upon the selection of a mediator to resolve the controversy or claim at dispute. The mediator may be selected from the approved list of mediators prepared by the American Arbitration Association. Mediation proceedings must be administered in accordance with the mediation rules or guidelines of the American Arbitration.

(4) If the mediation is not successful, then the parties agree to settle the controversy, claim or dispute by arbitration conducted by a single arbitrator in accordance with the guidelines of the American Arbitration Association. The arbitrator must be an active member of the California State Bar or a retired judge of the state or federal judiciary of California. Each party shall bear its own costs and expenses associated with the arbitration. The arbitrator’s fees and the administrative fees of the arbitration shall be shared equally among the parties. Each party shall bear their own costs and expenses. However, any party who fails or
refuses to submit to arbitration shall bear all costs and expenses incurred by such other party in compelling arbitration of any controversy, claim.

C. Recognition of CSD’s Rights

MSCP recognizes the Charter School Division’s rights as an authorizer to ensure MSCP is complying with the terms and conditions of its charter, as well as State and Federal laws. MSCP will cooperate with CSD regarding all inquiries and reports. MSCP recognizes and understands CSD’s rights as defined by California Education Code 47607(a)(1) and 47607(b).

D. Revocation Not Subject to Dispute Resolution

MSCP recognizes California Education Code 47607(b)(1-4)(c) in regards to charter revocation.
Element 15: Exclusive Public School Employer

_Governing Law: A declaration whether or not Math and Science College Prep shall be deemed the exclusive public school employer of the employees of Math and Science College Prep for the purposes of the Educational Employment Relations Act. -- California Education Code Section 47605(b)(5)(O)_

A. Exclusive Employer Statement

MSCP will be the exclusive employer of all employees of the charter school for collective bargaining purposes. As such, MSCP will comply with all provisions of the Educational Employment Relations Act ("EERA"), and will act independently from LAUSD for bargaining purposes. In accordance with the EERA, employees may join and be represented by an organization of their choice for collective bargaining purposes. However, unless the employees elect to be represented by an organization for bargaining purposes, all employees will be individually contracted.
Element 16: School Closure Procedures

*Governing Law: A description of the procedures to be used if Math and Science College Prep closes - Education Code Section 47605(b)(5)(p)*

**A. Revocation**
The District may revoke the Charter if MSCP commits a breach of any provision set forth in a policy related to Charter Schools adopted by the District Board of Education and/or any provisions set forth in the Charter School Act of 1992. The District may revoke the charter of MSCP if the District finds, through a showing of substantial evidence, that Charter School did any of the following:

- MSCP committed a material violation of any of the conditions, standards, or procedures set forth in the charter.
- MSCP failed to meet or pursue any of the pupil outcomes identified in the charter.
- MSCP failed to meet generally accepted accounting principles, or engaged in fiscal mismanagement.
- MSCP violated any provision of law.

Prior to revocation and in accordance with Cal. Educ. Code section 47607(d) and State regulations, the LAUSD Board of Education will notify MSCP in writing of the specific violation, and give MSCP a reasonable opportunity to cure the violation, unless the LAUSD Board of Education determines, in writing, that the violation constitutes a severe and imminent threat to the health or safety of the pupils. Revocation proceedings are not subject to the dispute resolution clause set forth in this Charter.

**Closure Action (LAUSD-Specific Language)**
The decision to close MSCP either by the MSCP governing Board or by the LAUSD Board of Education will be documented in a Closure Action. The Closure Action shall be deemed to have been automatically made when any of the following occur: the charter is revoked or non-renewed by the LAUSD Board of Education; the Charter School board votes to close the Charter School; or the Charter lapses.

**Closure Procedures (LAUSD-Specific Language)**
The procedures for charter school closure are guided by California Education Code sections 47604.32, 47605, 47605.6, and 47607 as well as California Code of Regulations, Title 5 (5 CCR), sections 11962 and 11962.1. A closed charter school must designate a responsible entity to conduct closure activities and identify how these activities will be funded. The procedures outlined below are based on “Charter School Closure Requirements and Recommendations (Revised 08/2009)” as posted on the California Department of Education website. References to “Charter School” applies to the charter school’s nonprofit corporation and/or governing board.

**Documentation of Closure Action**
The revocation or non-renewal of a charter school must be documented by an official action of the authorizing entity. Notice of a charter school’s closure for any reason must be provided by the authorizing entity to the California Department of Education (CDE). In addition, the charter school must send notice of its closure to:

1. Parents or guardians of students. Written notification to parents/guardians/caregivers of the enrolled students of MSCP will be issued by MSCP within 72 hours after the determination of a Closure Action and the effective date of closure. A copy of the written notifications to parents is also to be sent to LAUSD within the same time frames.

2. The authorizing entity

3. The county office of education. Written notification to the Los Angeles County Office of Education of the Closure Action shall be made by MSCP by registered mail within 72 hours of the decision to Closure Action. Charter School shall provide a copy of this correspondence to the ICSD.
4. The special education local plan area in which the school participates. Written notification to the Special Education Local Planning Area (SELPA) in which the Charter School participates of the Closure Action shall be made by MSCP by registered mail within 72 hours of the decision to Closure Action. Charter School shall provide a copy of this correspondence to the ICSD.

5. The retirement systems in which the school’s employees participate. The Charter School will within fourteen (14) calendar days of closure action contact the State Teachers Retirement System (STRS), Public Employees Retirement System (PERS), and the Los Angeles County office of Education and follow their procedures for dissolving contracts and reporting. Charter School shall provide a copy of this correspondence to the ICSD.

6. The CDE. Written notification to the California Department of Education of the Closure Action shall be made by MSCP by registered mail within 72 hours of the decision to Closure Action. Charter School shall provide a copy of this correspondence to the ICSD.

Notice must be received by the CDE within ten calendar days of any official action taken by the chartering authority. Notification of all the parties above must include at least the following:

1. The effective date of the closure
2. The name(s) of and contact information for the person(s) handling inquiries regarding the closure
3. The students’ school districts of residence
4. How parents or guardians may obtain copies of student records, including specific information on completed courses and credits that meet graduation requirements

In addition to the four required items above, notification to the CDE must also include:

1. A description of the circumstances of the closure
2. The location of student and personnel records

In addition to the four required items above, notification to parents, guardians, and students should also include:

1. Information on how to transfer the student to an appropriate school
2. A certified packet of student information that includes closure notice, a copy of their child’s cumulative record which will include grade reports, discipline records, immunization records, completed coursework, credits that meet graduation requirements, a transcript, and State testing results.
3. Information on student completion of college entrance requirements for all high school students affected by the closure

The charter school shall announce the closure to any school districts that may be responsible for providing education services to the former students of the charter school within 72 hours of the decision to Closure Action. This notice will include a list of returning students and their home schools. Charter school closures should occur at the end of an academic year if it is feasible to maintain a legally compliant program until then. If a conversion charter school is reverting to non-charter status, notification of this change should be made to all parties listed in this section.

School and Student Records Retention and Transfer

MSCP shall observe the following in the transfer and maintenance of school and student records:

1. The Charter School will provide the District with original cumulative files pursuant to District policy and applicable handbook(s) regarding cumulative records for secondary and elementary schools for all students both active and inactive at the Charter School.
Transfer of the complete and organized original student records to the District will occur within seven calendar days of the effective date of closure.

2. The process for transferring student records to the receiving schools shall be in accordance with LAUSD procedures for students moving from one school to another.

3. The Charter School will prepare an electronic master list of all students to the Innovation and Charter Schools Division. This list will include the student’s identification number, Statewide Student Identifier (SSID), birth date, grade, full name, address, home school, enrollment date, exit code, exit date, parent/guardian name(s), and phone number(s). If the Charter School closure occurs before the end of the school year, the list should also indicate the name of the school that each student is transferring to, if known. This electronic master list will be delivered in the form of a CD.

4. The original cumulative files should be organized for delivery to the District in two categories: active students and inactive students. The ICSD will coordinate with the Charter School for the delivery and/or pickup of the student records.

5. The Charter School must update all student records in the California Longitudinal Pupil Achievement Data System (CALPADS) prior to closing.

6. The Charter School will provide to the ICSD a copy of student attendance records, teacher gradebooks, school payroll records, and Title I records (if applicable). Submission of personnel records must include any employee records the charter school has. These include, but are not limited to, records related to performance and grievance.

7. All records are to be boxed and labeled by classification of documents and the required duration of storage.

Financial Close-Out
After receiving notification of closure, the CDE will notify the charter school and the authorizing entity if it is aware of any liabilities the charter school owes the state. These may include over-payment of apportionments, unpaid revolving fund loans or grants, or other liabilities. The CDE may ask the county office of education to conduct an audit of the charter school if it has reason to believe that the school received state funding for which it was not eligible.

MSCP shall ensure completion of an independent final audit within six months after the closure of the school that includes:

1. An accounting of all financial assets. These may include cash and accounts receivable and an inventory of property, equipment, and other items of material value.

2. An accounting of all liabilities. These may include accounts payable or reduction in apportionments due to loans, unpaid staff compensation, audit findings, or other investigations.

3. An assessment of the disposition of any restricted funds received by or due to the charter school.

This audit may serve as the school's annual audit.

The financial closeout audit of the Charter School will be paid for by the [Charter School]. This audit will be conducted by a neutral, independent licensed CPA who will employ generally accepted accounting principles. Any liability or debt incurred by MSCP will be the responsibility of the MSCP and not LAUSD. MSCP understands and acknowledges that [Charter School] will cover the outstanding debts or liabilities of MSCP. Any unused monies at the time of the audit will be returned to the appropriate funding source. MSCP understands and acknowledges that only unrestricted funds will be used to pay creditors. Any unused AB 602 funds will be returned to the District SELPA or the SELPA in which the MSCP participates, and other categorical funds will be returned to the source of funds.

MSCP shall ensure the completion and filing of any annual reports required. This includes:
1. Preliminary budgets
2. Interim financial reports
3. Second interim financial reports
4. Final unaudited reports

These reports must be submitted to the CDE and the authorizing entity in the form required. If the charter school chooses to submit this information before the forms and software are available for the fiscal year, alternative forms can be used if they are approved in advance by the CDE. These reports should be submitted as soon as possible after the closure action, but no later than the required deadline for reporting for the fiscal year.

For apportionment of categorical programs, the CDE will count the prior year average daily attendance (ADA) or enrollment data of the closed charter school with the data of the authorizing entity. This practice will occur in the first year after the closure and will continue until CDE data collection processes reflect ADA or enrollment adjustments for all affected LEAs due to the charter closure.

Disposition of Liabilities and Assets

The closeout audit must determine the disposition of all liabilities of the charter school. Charter school closure procedures must also ensure disposal of any net assets remaining after all liabilities of the charter school have been paid or otherwise addressed. Such disposal includes, but is not limited to:

1. The return of any donated materials and property according to any conditions set when the donations were accepted.
2. The return of any grant and restricted categorical funds to their source according to the terms of the grant or state and federal law.
3. The submission of final expenditure reports for any entitlement grants and the filing of Final Expenditure Reports and Final Performance Reports, as appropriate.

Net assets of the charter school may be transferred to the authorizing entity. If the Charter School is operated by a nonprofit corporation, and if the corporation does not have any other functions than operation of the Charter School, the corporation will be dissolved according to its bylaws.

   a. The corporation’s bylaws will address how assets are to be distributed at the closure of the corporation.
   b. A copy of the corporation’s bylaws containing the information on how assets are to be distributed at the closure of the corporation, are to be provided to LAUSD prior to approval of this Charter.

For six (6) calendar months from the Closure Action or until budget allows, whichever comes first, sufficient staff as deemed appropriate by the [Charter School] Board, will maintain employment to take care of all necessary tasks and procedures required for a smooth closing of the school and student transfers.

The MSCP Board shall adopt a plan for wind-up of the school and, if necessary, the corporation, in accordance with the requirements of the Corporations Code.

The Charter School shall provide LAUSD within fourteen (14) calendar days of closure action prior written notice of any outstanding payments to staff and the method by which the school will make the payments.

Prior to final closure, the Charter School shall do all of the following on behalf of the school’s employees, and anything else required by applicable law:

   a. File all final federal, state, and local employer payroll tax returns and issue final W-2s and Form 1099s by the statutory deadlines.
   b. File the Federal Notice of Discontinuance with the Department of Treasury (Treasury Form 63).
   c. Make final federal tax payments (employee taxes, etc.)
d. File the final withholding tax return (Treasury Form 165).

e. File the final return with the IRS (Form 990 and Schedule).

This Element 16 shall survive the revocation, expiration, termination, cancellation of this charter or any other act or event that would end [Charter School’s] right to operate as a Charter School or cause [Charter School] to cease operation. [Charter School] and District agree that, due to the nature of the property and activities that are the subject of this petition, the District and public shall suffer irreparable harm should Charter School breach any obligation under this Element 16. The District, therefore, shall have the right to seek equitable relief to enforce any right arising under this Element 16 or any provision of this Element 16 or to prevent or cure any breach of any obligation undertaken, without in any way prejudicing any other legal remedy available to the District. Such legal relief shall include, without limitation, the seeking of a temporary or permanent injunction, restraining order, or order for specific performance, and may be sought in any appropriate court.

Facilities (LAUSD-Specific Language)

- Proposed Charter School Location: Koreatown/Mid-Wilshire region of Los Angeles
- Names of District school sites near proposed location: Los Angeles SH, RFK/Ambassador Schools, West Adams Prep, Belmont SH
- Proposed Charter School to be located within the boundaries of LAUSD.

District-Owned Facilities: If Charter School is using LAUSD facilities as of the date of the submittal of this charter petition or takes occupancy of LAUSD facilities prior to the approval of this charter petition, Charter School shall execute an agreement provided by LAUSD for the use of the LAUSD facilities as a condition of the approval of the charter petition. If at any time after the approval of this charter petition Charter School will occupy and use any LAUSD facilities, Charter School shall execute an agreement provided by LAUSD for the use of LAUSD facilities prior to occupancy and commencing use.

Charter School agrees that occupancy and use of LAUSD facilities shall be in compliance with applicable laws and LAUSD policies for the operation and maintenance of LAUSD facilities and furnishings and equipment. All LAUSD facilities (i.e., schools) will remain subject to those laws applicable to public schools which LAUSD observes.

In the event of an emergency, all LAUSD facilities (i.e., schools) are available for use by the American Red Cross and public agencies as emergency locations which may disrupt or prevent Charter School from conducting its educational programs. If Charter School will share the use of LAUSD facilities with other LAUSD user groups, Charter School agrees it will participate in and observe all LAUSD safety policies (e.g., emergency chain of information, participate in safety drills).

The use agreements provided by LAUSD for LAUSD facilities shall contain terms and conditions addressing issues such as, but not limited to, the following:

- Use. Charter School will be restricted to using the LAUSD facilities for the operation of a public school providing educational instruction to public school students consistent with the terms of the charter petition and incidental related uses. LAUSD shall have the right to inspect LAUSD facilities upon reasonable notice to Charter School.
- Furnishings and Equipment. LAUSD shall retain ownership of any furnishings and equipment, including technology, (“F&E”) that it provides to Charter School for use. Charter School, at its sole cost and expense, shall provide maintenance and other services for the good and safe operation of the F&E.
- Leasing; Licensing. Use of the LAUSD facilities by any person or entity other than Charter School shall be administered by LAUSD. The parties may agree to an alternative arrangement in the use agreement.
- Minimum Payments or Charges to be paid to LAUSD Arising from the Facilities.

  (i) Pro Rata Share. LAUSD shall collect and Charter School shall pay a Pro Rata
Share for facilities costs as provided in the Charter School Act of 1992 and its regulations. The parties may agree to an alternative arrangement regarding facilities costs in the use agreement; and

(ii) Taxes; Assessments. Generally, Charter School shall pay any assessment or fee imposed upon or levied on the LAUSD facilities that it is occupying or Charter School’s legal or equitable interest created by the use agreement.

• Maintenance & Operations Services. In the event LAUSD agrees to allow Charter School to perform any of the operation and maintenance services, LAUSD shall have the right to inspect the LAUSD facilities and the costs incurred in such inspection shall be paid by Charter School.

(i) Co-Location. If Charter School is co-locating or sharing the LAUSD facilities with another user, LAUSD shall provide the operations and maintenance services for the LAUSD facilities and Charter School shall pay the Pro Rata Share. The parties may agree to an alternative arrangement regarding performance of the operations and maintenance services and payment for such in the use agreement.

(ii) Sole Occupant. If Charter School is a sole occupant of LAUSD facilities, LAUSD shall allow the Charter School, at its sole cost and expense, to provide some operations and maintenance services for the LAUSD facilities in accordance with applicable laws and LAUSD’s policies on operations and maintenance services for facilities and F&E. NOTWITHSTANDING THE FOREGOING, LAUSD shall provide all services for regulatory inspections, which as the owner of the real property is required to submit, and deferred maintenance and Charter School shall pay LAUSD for the cost and expense of providing those services. The parties may agree to an alternative arrangement regarding performance of the operations and maintenance services and payment for such services in the use agreement.

• Real Property Insurance. Prior to occupancy, Charter School shall satisfy those requirements to participate in LAUSD’s property insurance or, if Charter School is the sole occupant of LAUSD facilities, obtain and maintain separate property insurance for the LAUSD facilities. Charter School shall not have the option of obtaining and maintaining separate property insurance for the LAUSD facility IF Charter School is co-locating or sharing the LAUSD facility with another user.

Facility status: The charter petitioner must demonstrate control of a facility such as a commitment from the landlord, to ensure that the property is actually available to the charter developer, and that the facility is usable with or without conditions (such as a conditional code permit.) The charter school facility shall comply with all applicable building codes, standards and regulations adopted by the city and/or county agencies responsible for building and safety standards for the city in which the charter school is to be located, and the Americans with Disabilities Act (ADA). Applicable codes and ADA requirements shall also apply to the construction, reconstruction, alteration of or addition to the proposed charter school facility. The Charter School cannot exempt itself from applicable building and zoning codes, ordinances, and ADA requirements. Charter schools are required to adhere to the program accessibility requirements of Federal law (Americans with Disabilities Act and Section 504).

Occupancy of the Site: The charter petitioner or developer shall provide the District with a final Certificate of Issued by the applicable permitting agency, allowing the petitioner to use and occupy the site. The Charter School may not open without providing a copy of the Certificate of Occupancy for the designated use of the facility. If the Charter School moves or expands to another facility during the term of this charter, the Charter School shall provide a Certificate of Occupancy to the District for each facility before the school is scheduled to open or operate in the facility or facilities. Notwithstanding any language to the contrary in this charter, the interpretation, application, and enforcement of this provision are not subject to the Dispute Resolution Process outlined in Element 14.

Health & Safety: The school will comply with the Healthy Schools Act, California Education Code Section 17608, which details pest management requirements for schools. Developers may find additional information at: www.laschools.org/employee/mo/ipm
**Asbestos Management**: The charter school will comply with the asbestos requirement as cited in the Asbestos Hazard Emergency Response Act (AHERA), 40CFR part 763. AHERA requires that any building leased or acquired that is to be used as a school or administrative building shall maintain an asbestos management plan.