



**A G E N D A**  
**NOTICE OF SPECIAL**  
**BOARD OF EDUCATION MEETING**  
**RIVERSIDE UNIFIED SCHOOL DISTRICT**  
Arlington High School Library  
2951 Jackson Street, Riverside, California  
December 1, 2014  
4:30 p.m.

**BOARD OF EDUCATION:**  
**MRS. PATRICIA**  
**LOCK-DAWSON,**  
**PRESIDENT**  
**MR. TOM HUNT,**  
**VICE PRESIDENT**  
**MRS. KATHY ALLAVIE,**  
**CLERK**  
**MRS. GAYLE CLOUD**  
**AND MR. BRENT LEE,**  
**MEMBERS**

You are hereby notified that the Board of Education of the Riverside Unified School District will hold a special meeting at 4:30 p.m. Monday, December 1, 2014, at Arlington High School Library, 2951 Jackson Street, Riverside, California.

The only business to be transacted at this meeting shall include discussion and/or action on the following items:

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Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, as required by Section 202 of the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification of accommodation in order to participate in a meeting should direct such request to the District Superintendent at 788-7135, Ext. 80402 at least 48 hours before the meeting, if possible.

As required by Government Code 54957.5, agenda materials can be reviewed by the public at the District's administrative offices, Reception Area, First Floor, 3380 14<sup>th</sup> Street, Riverside, California.

**OPEN SESSION**

**CALL MEETING TO ORDER – 4:30 p.m.**

**ESTABLISHMENT OF A QUORUM OF THE BOARD OF EDUCATION**

**PLEDGE OF ALLEGIANCE**

**SECTION A – PUBLIC INPUT**

*Public Input provides an opportunity for citizens to make suggestions, identify concerns, or request information about matters affecting the school District for items **NOT on the agenda**. Complaints against employees will normally be heard in Closed Session, and the District's complaint procedure should be followed before discussion with the Board.*

*Individuals or groups who wish to address the Board are requested to fill out a "Request to Address the Board of Education" card located on the table at the back of the Board Room. Comments or presentations should be limited to three minutes or less.*

*Pursuant to the Brown Act, Board of Education members cannot discuss or take action on any item which does not appear on the Consent and Action Calendars of the agenda. The Board of Education may provide a reference to staff or other resources of information, request staff to report back at a subsequent meeting, or direct staff to place an item on a future agenda.*

December 1, 2014

**SECTION B – DISTRICT SUPERINTENDENT’S REPORT**

<u>Oral Report Assigned To</u>	<u>For Board</u>	<u>Page</u>
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**SECTION C – STUDY SESSION**

**C.1 Riverside STEM (Science, Technology, Engineering, Math)  
Academy High School – Five Year Plan**

Asst. Supt.  
Curr. & Inst.  
K-12

Study  
Session

1-63

*The Board will receive information on the Riverside STEM  
Academy High School Five Year Plan.*

**SECTION D – CONCLUSION**

**D.1 Board Members’ Comments**

**PUBLIC PARTICIPATION ON CLOSED SESSION MATTERS**

**SECTION E – CLOSED SESSION**

The Board of Education will recess to Closed Session to discuss:

1. Conference With Legal Counsel – Anticipated Litigation  
Significant Exposure to Litigation Pursuant to Subdivision (d) of  
Section 54956.9: (1 case)

**RECONVENE OPEN SESSION**

**ADJOURNMENT**

The next regular meeting of the Board of Education is scheduled for Monday, December 8, 2014. The meeting will be called to order at 4:30 p.m. in the Board Room at 6735 Magnolia Avenue, Riverside, California. The Board will adjourn to Closed Session from 4:30 to 5:30 p.m. at which time the Board of Education will reconvene in Open Session in the Board Room at 6735 Magnolia Avenue, Riverside, California.

Copies to: Board Members  
News Media

Posted 4:00 p.m., Friday, November 21, 2014

**Board Meeting Agenda  
November 17, 2014**

Topic: Riverside STEM (Science, Technology, Engineering, Math) Academy High School – Five Year Plan

Presented by: Antonio Garcia, Assistant Superintendent, Curriculum and Instruction K-12  
Dr. Kirk Lewis, Assistant Superintendent, Operations  
Dale Moore, Principal, Riverside STEM Academy  
John Robertson, Instructional Services Specialist

Responsible  
Cabinet Member: Antonio Garcia, Assistant Superintendent, Curriculum and Instruction K-12

Type of Item: Board Study Session

Short Description: The Board will receive information on the Riverside STEM Academy High School Five Year Plan.

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**DESCRIPTION OF AGENDA ITEM:**

A five year plan describing the proposed development of the Riverside STEM Academy High School instructional program will be presented to the Board of Education. The Board will consider plans for providing a STEM centered course of study from 9<sup>th</sup> through 12<sup>th</sup> grade.

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**FISCAL IMPACT:** None

**RECOMMENDATION:** Information Only

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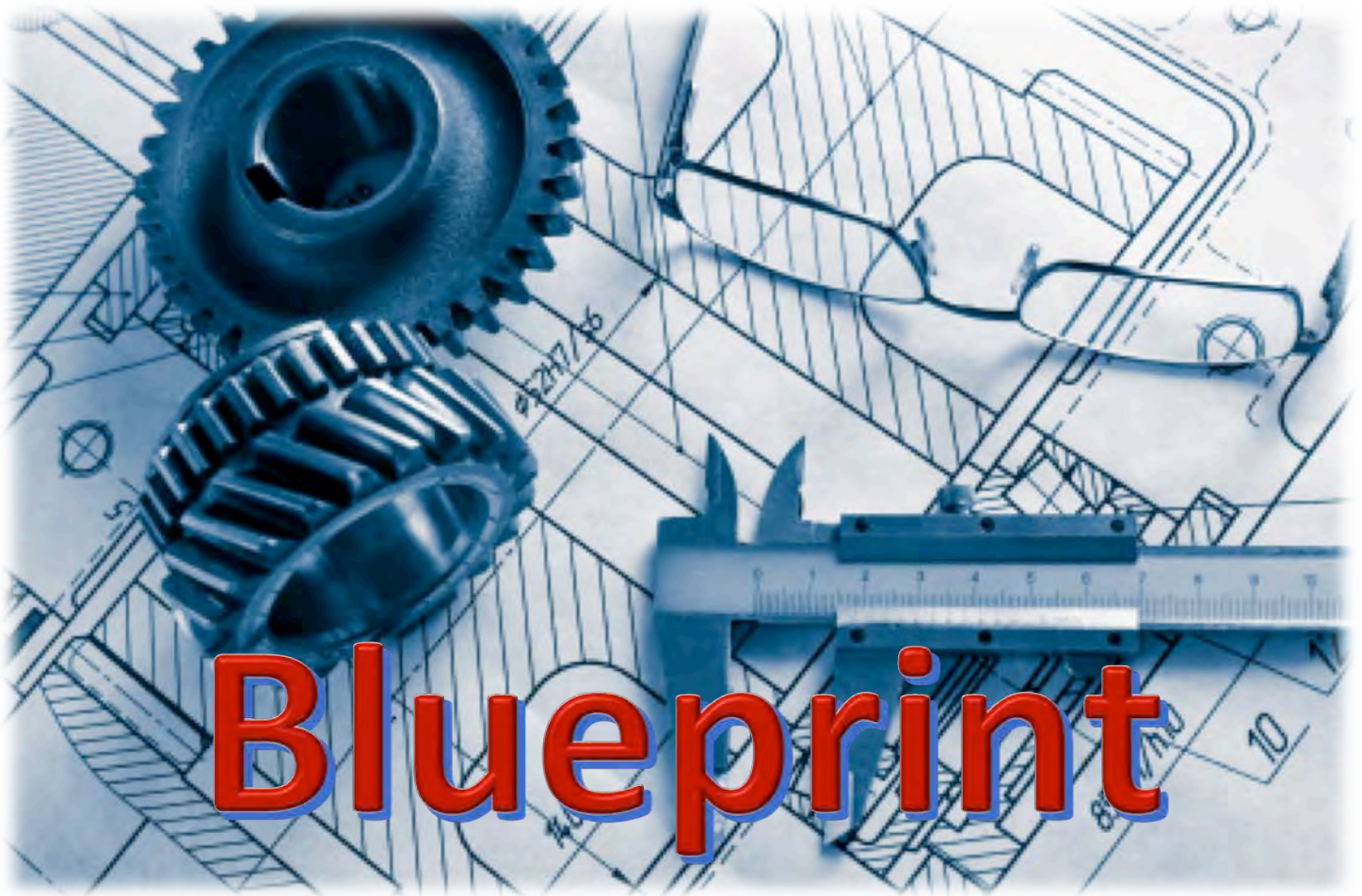
**ADDITIONAL MATERIAL:** PowerPoint Presentation and Informational Packet

Attached: Yes



RIVERSIDE  
**STEM**  
HIGH SCHOOL

RIVERSIDE UNIFIED SCHOOL DISTRICT



**Blueprint**

**For the Future**

# **Blueprint**

## **For the Future**

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**Riverside STEM Academy High School**  
***Blueprint for the Future***

**Mission:**

Riverside STEM High School’s mission is to provide students a collaborative, technological and innovative structure for deep scientific and mathematical literacy, emphasizing critical thinking, problem-solving, and effective communication skills with an interdisciplinary focus.

**Vision:**

We prepare students to excel in STEM fields of study and succeed in 21st century careers as leaders and innovators.

**Overview**

The Riverside STEM Academy High School program is designed to provide a seamless progression of STEM centered learning that begins in Grade 5 with accelerated pacing. The program allows students to authentically engage in advanced studies, tied to real world problems, and explore their personal interests as they prepare for post secondary education.

The specialized nature of the STEM curriculum offered at Riverside STEM High School narrows the course offerings compared to a regular comprehensive high school so that graduates are equipped specifically for continuing on to a four year university program in science or engineering and subsequent graduate studies and research. As a program of choice in our District, beginning at the fifth grade, students have committed to a clear academic pathway that provides them with an advanced education centered on science and engineering practices. At graduation, students will have mastered the five instructional pillars of the STEM program. They will have a deep understanding and experience in applications of mathematics, science, research and engineering design, communications, and computer programming.

Currently, in the 2014 - 2015 school year, Riverside STEM Academy High School offers a 9th and 10th grade program to 118 students. All high school students began their science progression with Honors Chemistry and their math progression with Algebra II or Geometry. All current 9th grade students are enrolled in Algebra II and are on pace with the planned course progression for the high school program. Students currently receive Honors level humanities courses and have a choice between French and Spanish. Students are offered an elective called STEM Research Methodologies in 9th grade, written specifically to promote and develop the skills and knowledge to engage in authentic research or engineering design that will support the student’s senior year Capstone Project. No elective is offered in 10th grade but students are supported by teachers through an after school intervention called STEM Lab and a Mentorship program.

The first graduating class of 2017 will complete their core high school program with AP Calculus, AP Chem in 11th grade, and AP Statistics and AP Physics in their senior year. Their humanities courses will be Honors level American and English Literature and Composition, US History and American Government/Economics. Elective options in the plan include a Project Lead the Way (PLTW) Introduction to Engineering Design, a visual arts oriented course which will provide the “f” requirement for the UC college entrance requirements. Senior year elective options will include AP Environmental Science and a second PLTW design course. All Riverside STEM Academy students will complete a Capstone Project, a science research project or engineering design problem identified in their freshman year and developed over the course of their high school years. The school mentorship program and a planned student Capstone Advisory session will provide students the support and guidance needed to engage in high level research or engineering work and successfully complete the STEM Capstone Project.

One of the most notable distinctives of Riverside STEM Academy is the articulation of the instructional program from grade 5 through grade 12. Foundational to the high school course progression is the learning and skills development through the middle school years that prepare students to begin grade 9 with course work normally taken in the sophomore and junior years. Beginning in 5<sup>th</sup> grade, Riverside STEM Academy students receive 85 minutes of daily instruction in science, mathematics, and humanities. By 9<sup>th</sup> grade, these students have completed advanced studies in mathematics and science and are prepared to embark on a program that begins with Honors Chemistry and Honors Algebra 2. The coursework offered to students through to graduation maintains this pace of achievement and is designed to prepare graduates for the rigor and demands of the top university programs in the country.

The interdisciplinary and collaborative approach to instruction taken by the teachers at Riverside STEM Academy is another notable component of the program. The faculty at the school has taken an active role in designing the instructional program and working with administrators in preparing a learning environment in which both teachers and students experience growth and discovery. Teachers across the disciplines collaborate on pedagogy, identify linkages between subject areas and leverage opportunities for students to apply knowledge and skills from one area of study to the next. This culture of collaboration and professional learning is a main driver for success in student motivation and achievement, building their capacity to sustain the pace of learning needed to meet their goals. As the program builds from year to year, new teachers enter this environment and engage in the collaboration modeled by their peers.

The current high school schedule is a conventional model that provides six standard class periods in the instructional day. This structure is considered only a starting point that allows our current students to continue with a rigorous and fulfilling curriculum while addressing issues of small school size and limited facilities. Alternative modified schedule models are being considered that

better provide our students with the opportunity to personalize their learning experience, explore their individual interests, and connect to real world problems and solutions. Beginning in the 2015 - 2016 academic year, independent advisory time will be added to the daily schedule providing teachers and mentors the opportunity to support student progress on the Capstone Project. Modification of the daily schedule is a focus for future planning, requiring consideration of the teacher collective agreement, capacity of the facilities in both the short term and long term, and the goal to provide a unique and personal experience for high school students.

### **High School Planning to Date**

Planning for the Riverside STEM Academy High School originated from a directive to continue the middle school program into 9th grade and then grow the school a grade level each year. Planning meetings with parents, teachers and district administrators were initiated in 2012 and planning proceeded on a year to year basis to define a path forward and resolve the most pressing needs. The lack of a longer term vision and plan for the STEM High School was recognized during a Board of Education meeting in February, 2014 and the Board made a decision to convene an ad hoc committee to provide a short and long term vision and plan.

### **Board of Education Ad Hoc Committee Directional Statements**

An Ad hoc Committee was convened and chaired by Board Member Mrs. Kathie Allavie in the spring of 2014 to look at the Riverside STEM Academy High School and provide some guidance in developing a vision for the school. The committee drew a variety of stakeholders together from parents, the business community, higher education, and RUSD and attended several sessions to review different STEM instructional models and discuss a path forward for RUSD. The committee drafted 12 directional statements to represent the committee's work:

- We want our STEM school to be a 5-12 school.
- We want the vision and mission statements to pertain to the entire 5-12 school.
- We want our school to be located close to a school of higher education.
- We want our 5-8 students and our 9-12 students to share the same school site.
- We want our school to be small.
- We will create a small, interdisciplinary, personalized, research-based environment for our high school students.
- We will offer our high school students the same flexibility we currently offer our 5-8 students.



- We will offer our high school students A-G programs, even if some of those classes must be taken online.
- We recognize that we cannot offer our students every extra-curricular option that traditional high schools do, so we will have unique choices of VAPA and sports options.
- We will discuss whether AP classes have a place in this new environment.
- We will grow our campus at the Mount Vernon site, with portables and improvements.
- We will ask that a new STEM school be placed on the list for the next General Obligation Facilities Bond.

### **Other Stakeholder Input**

#### *RSA Priorities Survey, March 2014*

Riverside STEM Academy parents conducted a survey, in support of the Ad Hoc Committee, to generate information that reflected their collective priorities. The highest priority was the hiring of innovative, passionate staff followed by a program that offers a unique STEM culture and produces well rounded students. A third tier of priorities included science lab facilities that support a variety of student research and investigation, systems of support and intervention for students, and partnerships with higher education.

#### *Riverside STEM Academy Student Surveys*

Student surveys indicate that cultivating a traditional high school experience is a priority. Independent choice and extracurricular options need to be offered to maintain an interest in attending the Riverside STEM Academy High School. Another chief concern is the campus and the need to have a “high school” space available distinguishable from the middle school. Students do demonstrate a desire to stay together as a class and identify with the STEM Academy.

### **Planning Constraints**

Several factors impact the planning for the Riverside STEM Academy High School program. The size of the current classes is below the long run goal of three sections per grade level. Developing an instructional program for low numbers over the short term presents difficulties in offering teaching positions that attract experienced, credentialed teachers that are leaders in their content area. Creative solutions are required to bridge the divide between the fledgling program we have begun to shape and the long term, sustainable model that will evolve through the next three to four years.

Another constraint is the limitation imposed by the current configuration of the campus. The campus and facilities were originally designed for an elementary setting. Providing a unique program from grade 5 through 10 currently maximizes the capacity of the site to house students and meet the academic needs of a high school STEM education. Anticipated growth will require short term placement of portable classrooms and laboratories. Plans are currently in place to temporarily meet the requirements for the addition of grades 11 and 12 at current student numbers. Until such time that a permanent facility is constructed, the school will need to operate two sections at each high school grade level. If plans go forward to rebuild on the current campus, significant interim adjustments to the program will be necessary to accommodate construction.

### **Program Development and Planning**

A formal planning model will be instituted to support the development of the long term Riverside STEM High School program. The model will define a process for collecting information from stakeholders, collaborating with community members, framing the long term objectives for the full Riverside STEM Academy program, and designing a comprehensive instructional program. An important component of the planning process will be the periodic assessment of stakeholder feedback and needs.

A steering committee will be convened comprised of select members from higher education, business, students, parents, and district and school administration. The committee will meet quarterly to review plans, analyze information regarding the current program, assess alignment with the school mission and vision, and issue guiding statements for the design process. The school leadership team will facilitate a design process that responds to stakeholder feedback, steering committee guidance, and produces recommendations for modifying the instructional program. The steering committee will also be asked to extend the planning horizon and begin to identify alternatives that promote innovation and creativity, not only in student learning, but in curriculum design, course offerings, and student scheduling. Consideration of these alternatives and their relevance to the STEM program will help move the school towards leading edge strategies that generate greater returns in student satisfaction and achievement.

### **Community Involvement**

The Riverside STEM Academy has developed a network of support within the greater Riverside community that includes parents, institutes of higher education, and local business. The great assortment of extracurricular programs at the Academy are sponsored by local business interests and supported by parents. Professionals and academics from the region attend the weekly symposium to present information about a variety of STEM topics and their application in the

real world. The school has forged a close working relationship with UCR faculty and students. A mentorship program links Riverside STEM Academy students with UCR professors and graduate students who provide them with guidance on research and access to laboratories and equipment.

California Baptist University has signed an agreement with Riverside STEM Academy to partner on mentorships, provide advisors for content areas, keynote speakers for the weekly symposium, and access to laboratories and facilities to enrich the academic program. This agreement is a model for further engagement with higher education. There is an expectation that the Riverside STEM Academy High School will engage with higher education leadership to explore opportunities for students to acquire college credit, attend college courses, and establish links that will encourage our students to attend local colleges. To meet these expectations, planning should include conversations aimed at creating formal agreements with UCR, RCC, and CBU that define common goals and create expanded opportunities for our students.

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
<b>Grade Level Growth</b>	<ul style="list-style-type: none"> <li>• Addition of 10<sup>th</sup> grade</li> </ul>	<ul style="list-style-type: none"> <li>• Addition of 11<sup>th</sup> grade</li> </ul>	<ul style="list-style-type: none"> <li>• Addition of 12 grade</li> </ul>		
<b>High School Master-Schedule Development</b>	<ul style="list-style-type: none"> <li>• Redesign the HS program with HS Design Team</li> <li>• Investigate a modified master schedule for 2015-2016</li> </ul>	<ul style="list-style-type: none"> <li>• Implement new master schedule for 9-11 grades</li> <li>• Continue researching modified master schedule</li> </ul>	<ul style="list-style-type: none"> <li>• Implement new master schedule for all four years of high school</li> <li>• Begin development modified master schedule for future</li> </ul>	<ul style="list-style-type: none"> <li>• Continue developing modified master schedule for future RSA HS expansion</li> </ul>	<ul style="list-style-type: none"> <li>• Continue developing modified master schedule for future RSA HS expansion with personalized learning incorporated</li> </ul>
<b>Curriculum Development</b>	<ul style="list-style-type: none"> <li>• Prepare to implement the Project Lead the Way (PLTW) Introduction to Engineering Design Course</li> <li>• Plan for <u>integration</u> of coding (C-STEM) in math classes- Additional training</li> <li>• Plan &amp; develop Capstone Advisory time into the high school program</li> <li>• Plan <u>interdisciplinary</u> units</li> <li>• Planning for the integration of “Big History” in ELA-10</li> <li>• Planning for the integration of the <i>History of Science</i> in the World History course</li> <li>• Introduce Integration of coding in math courses (C-STEM)</li> <li>• STEM Lab- After school tutoring RTI focused on math and science</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of PLTW Introduction to Engineering Design</li> <li>• Prepare to Implement PLTW Principals of Engineering course</li> <li>• Continue planning for interdisciplinary units for 2016-2017</li> <li>• Increase the integration of computer coding (C-STEM) in HS math classes-additional training</li> <li>• Integration of “Big History” in ELA 10<sup>th</sup> grade ELA</li> <li>• Integration of <i>History of Science</i> in 10 grade World History</li> <li>• Prepare to implement new 11<sup>th</sup> grade academic courses (see curriculum chart)</li> <li>• Implement Capstone Advisory time</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of Principals of Engineering course</li> <li>• Prepare to implement Computer Science and Software Engineering course</li> <li>• Interdisciplinary planning</li> <li>• 3<sup>rd</sup> year of the Integration of computer coding (C-STEM) math courses</li> <li>• Prepare to implement new 12<sup>th</sup> grade academic courses (see curriculum chart)</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of Computer Science Software Engineering course</li> <li>• Prepare to implement Engineering and Design course</li> <li>• Continue improving RSA HS curriculum with revisions including integration of STEM curriculum components and interdisciplinary units</li> </ul>	<ul style="list-style-type: none"> <li>• Implement Engineering and Design course</li> <li>• Continue improving RSA HS curriculum with revisions including integration of STEM curriculum components and interdisciplinary units</li> </ul>

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
<b>Facility Development</b>	<ul style="list-style-type: none"> <li>• Facility planning meetings with school site, Instructional Services, and Operations for short-term facility needs</li> <li>• Facility feasibility study on current site</li> <li>• Planning for Studio Design Lab</li> <li>• Discuss bond measure to fund RSA long-term facility requirements</li> <li>• Repurpose two existing portables, furniture add instructional technology</li> <li>• Consolidated three locker rooms into two locker rooms</li> </ul>	<ul style="list-style-type: none"> <li>• Based on 14-15 decision- prepare bond measure to include RSA long-term facility needs</li> <li>• Continue working with Architects on short-term facility needs</li> <li>• Master planning with LPA on long-term RSA facility</li> <li>• Addition of two science lab portables</li> <li>• Expand Parking- Reconfigure Entry, Drop-off, and add 27 additional parking stalls</li> </ul>	<ul style="list-style-type: none"> <li>• Submit RUSD bond measure in November of 2016 that includes RSA facilities needs</li> <li>• Make short-term additions as needed</li> <li>• Continue working with Architects on long-term facility needs</li> <li>• Complete RSA long-term facility plan</li> <li>• Addition of HS restrooms</li> <li>• Add one classroom portable</li> <li>• Add two Locker Room Portables and convert existing locker rooms into classrooms</li> </ul>	<ul style="list-style-type: none"> <li>• Begin construction of RSA redevelopment plan</li> <li>• Make short-term additions as needed</li> </ul>	<ul style="list-style-type: none"> <li>• Continue construction of new facilities at RSA</li> <li>• Make short-term additions as needed</li> </ul>
<b>Staffing: Additional Allocations per year</b>	<p><b>Grades 9-10</b></p> <ul style="list-style-type: none"> <li>• ELA teacher- Increase to 1.0 FTE</li> <li>• Math teacher- Increase to 1.0 FTE</li> <li>• Foreign language teacher- Increase to 1.0 FTE</li> <li>• AP Biology teacher- .4 FTE</li> <li>• AP European History teacher- Add part time</li> <li>• Counselor- .5 FTE</li> <li>• Attendance Asst (6 hr)</li> </ul>	<p><b>Grades 9-11</b></p> <ul style="list-style-type: none"> <li>• History teacher- Increase to 1.0 FTE</li> <li>• STEM Elective / VAPA teacher- 1.2 FTE</li> <li>• ELA Teacher .2 FTE</li> <li>• Foreign language .2 FTE</li> <li>• Math/physics teacher .2 FTE</li> <li>• High school band teacher .2 FTE</li> <li>• 60% TOSA/40% teacher</li> <li>• Counselor- Increase to 1.0 FTE</li> <li>• 3<sup>rd</sup> Campus supervisor</li> <li>• School Office Assist (4 hr)</li> </ul>	<p><b>Grades 9-12</b></p> <ul style="list-style-type: none"> <li>• AP Biology/ AP Environmental science teacher- Increase to 1.0 FTE</li> <li>• ELA teacher- Increase from .2 to .6 FTE</li> <li>• Math/Physics teacher increase from .2 to .6</li> <li>• Elective/VAPA teacher- .4 FTE</li> <li>• Increase TOSA from 60% to 100%</li> </ul>	<p><b>Grades 9-12</b></p> <ul style="list-style-type: none"> <li>• Adjust staffing as needed. Overall staffing will continue to be the same until new facility is completed</li> <li>• TOSA position ends</li> <li>• Added Asst. Principal</li> <li>• Add Asst. Principal Secretary</li> </ul>	<p><b>Grades 9-12</b></p> <ul style="list-style-type: none"> <li>• Adjust staffing as needed. Overall staffing will continue to be the same until new facility is completed</li> </ul>

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
<b>Program Development</b>	<ul style="list-style-type: none"> <li>Organize Focus-groups to give input on the HS program</li> <li>Develop Business and Community partners</li> <li>Add After school STEM Lab and continue program each year thereafter</li> <li>Form Steering Committee</li> </ul>	<ul style="list-style-type: none"> <li>Develop Business and Community partners</li> <li>Development of RSA Foundation</li> <li>Steering Committee</li> <li>Summer PE course for 10 graders to allow for STEM elective course</li> <li>Add a before-school HS band program</li> </ul>	<ul style="list-style-type: none"> <li>Continue developing business and community partners</li> <li>Steering Committee</li> </ul>	<ul style="list-style-type: none"> <li>Continue developing business and community partners</li> <li>Steering Committee</li> <li>Identify service learning opportunities and develop an implementation plan, grade 5 through 12. Outcome: A student service learning program aligned with partnership goals and objectives.</li> </ul>	<ul style="list-style-type: none"> <li>Continue developing business and community partners</li> <li>Steering Committee</li> <li>Implement a service learning plan that connects students to the greater community and forges a common identity among classmates. <i>Outcome: Community minded students with a greater sense of contributing to common goals</i></li> </ul>

\*The Five-Year plan is based on a staffing allocation to support two sections of students at each grade level

## **Year 1: 2014 - 2015**

### **Course Offerings**

This current academic year offers courses to approximately 69 ninth grade and 49 tenth grade students.

At the ninth grade level all students are enrolled in Algebra II, Honors Chemistry, Honors Introduction to Literature, Physical Education, a choice between Spanish or French, and Science Research Methodologies. The Science Research Methodologies is an elective specifically designed for Riverside STEM Academy students providing foundational skills to support their initiation of a Capstone Project that will be a multi-year effort completed in their senior year.

At the tenth grade level, math instruction is split between Honors Algebra II and Honors Pre Calculus as some students began their ninth grade year with Geometry. Other tenth grade courses are Honors Introduction to Literature and Composition, AP Biology, AP European History, Spanish or French 2, and Physical Education. An elective option is not offered in the tenth grade at this time.

### **Instructional Components**

The instructional program at Riverside STEM Academy High School has two components with respect to planning and providing an authentic and engaging learning experience for students. The first is meeting the immediate needs of the current high school students and ensuring they reach their full potential upon graduation. The second component is to establish a planning and development process that identifies and understands stakeholder needs and aligns those needs within a rigorous STEM focused learning progression, grade 5 through graduation.

The first priority for planning in 2014 - 2015 is to provide a choice of courses that conform with the UC A - G requirements and provide a balance of AP and Honors courses such that students have the opportunity to graduate in a competitive position for entry into top four year university programs. The course progression must also satisfy the mission of the school to provide students with an interdisciplinary and collaborative learning environment that promotes deep scientific and mathematical literacy, critical thinking, and problem solving while developing strong communication skills.

The current course offering meets this priority for the most part but more work is required to deepen the learning experience of students. The STEM Research Methodologies elective offered in 9th grade provides a foundation for further exploration into scientific research, engineering

design, and data management and analysis. This 9th grade elective will be replaced with Project Lead the Way, Introduction to Engineering, in subsequent years. Planning is to begin for a Studio Lab to house a work space for student design work and fabrication. The lab will support “beyond school hours” school enrichment opportunities that augment classroom learning and provide on-site facilities for engineering components of the Capstone Project. The 10th grade program does not offer an elective for this academic year. Greater opportunities for self discovery and engagement in personal interests must be created. Options to leverage interdisciplinary learning need to be taken advantage of. To that end, the following tasks have been identified:

- Identify a 4 year elective stream that offers students STEM oriented curriculum that meets the VAPA requirement for the “f” component in the UC system. Riverside STEM Academy will incorporate Project Lead the Way curriculum to bring in engineering design, computer science, and technology with supplemental art curriculum. *Outcome: Elective for 2015 - 2016, grade 9, 10 and 11.*
- Integrate C-STEM computer coding with math instruction. Provide professional development and teacher planning time. *Outcome: Math units of study integrated with computer coding instruction, implementation 2015 - 2016.*
- Design and implement an after school student intervention and support program (STEM Lab) . Provide additional teacher planning time and fund after school hours. *Outcome: After school STEM Lab for student support, beginning 2nd semester 2014 - 2015.*
- Facilitate course redesign process for integrating History of Science in 10th grade history by providing teacher planning time and addressing professional development needs. *Outcome: History units of study integrated with history of science content.*
- Facilitate course redesign process for integrating Big History Project in 10th grade English Language Arts by providing teacher planning time and addressing professional development needs. *Outcome: ELA units of study accessing Big History Project content.*
- Develop a virtual course for 10th grade PE students to be taken anytime from grade 10 to grade 12. This will provide an elective opportunity in the master schedule, 2015 - 2016. *Outcome: Additional elective “Project Lead the Way” Introduction to Engineering Design.*
- Provide professional development for Project Lead the Way instructors. *Outcome: Qualified teachers for Project Lead the Way, Introduction to Engineering.*
- Plan and design a Studio Lab that will provide resources and equipment for students to design and fabricate components that support classroom learning and engineering components of the Capstone Project. *Outcome: A specialized Studio Lab for student design and fabrication.*



## Facilities

The current program is being supported by existing facilities on the Riverside STEM Academy campus. Three portable classrooms and two repurposed kindergarten classrooms house the high school in two locations on the campus. Classrooms are not designed for instruction in chemistry or biology. Portable lab stations and equipment are being utilized to meet instructional needs.

The current public parking lot and driveway system is functioning at current traffic levels with significant congestion at the start and end of the day. Increased growth will require modification of the parking area.

A limited cafeteria is staffed by two nutrition services workers and serves food prepared at North High School and transported to the campus. High school students are served lunch at 1:05 on regular days and 12:29 on planning days.

The campus is being utilized at maximum capacity and continued growth will require the addition of classroom space and supporting facilities such as portable science labs, restrooms and locker rooms. Board approval for additional portable classrooms is required for the 2015 - 2016 and 2016 - 2017 school years. Of critical importance is the addition of fully equipped labs designed to meet the needs of an intensive, hands on experiential science education. The long term goal for the Riverside STEM Academy High School is a student capacity of three sections per grade level housed at the current site. Tasks to be completed include:

- Add additional classroom space for the Studio Lab to the short term facilities plan. *Outcome: Inclusion of Studio Lab space in short term planning.*
- Present a Board of Education action item for approval of additional classroom space and supporting facilities (science labs, restrooms, cafeteria configuration, parking, access) as per the current short term facilities plan authored by architecture consultants. *Outcome: finalize preparations for housing students in 2015 - 2016 and 2016 - 2017.*
- Initiate the process of designing and building a STEM Academy campus to meet long term goals. *Outcome: Site Analysis for the Mt. Vernon location.*

## Staffing

The Riverside STEM Academy High School is currently staffed by full time teachers for math, chemistry, English language arts, and a second language. Each full time position includes a non-instructional component which teachers are working on larger program development and course design issues. Part time positions are European history and AP biology teachers. Physical education is taught by certificated PE teachers that are in place in the 5-8 program.

## Program Development

Program development will be driven by a planning cycle incorporating a design process that responds to the guidance of a steering committee and recurring stakeholder input. The design process will be facilitated by the school leadership team and build on foundational work of school staff, parents, and administrators. Formalizing the planning process and establishing an accountability component through a steering committee will create a common focus for charting a path for the high school.

An organizational structure is also needed for developing partnerships with higher education institutes. There is much discussion about the role of UCR, RCC, and CBU in the future of the high school but little progress has been made in defining relationships and setting common goals. A more concerted effort is required to reach out to higher education.

Tasks to be completed include:

- Convene a formal steering committee to review progress and provide guidance in the planning process. *Outcome: Quarterly review of planning progress.*
- Develop a strategy for engaging higher education institutes in formal agreements and setting common goals. *Outcome: Dialogue with higher education institutes, common goals, access to college credit, access to college courses.*
- Develop a strategy for engaging the business community and establishing common goals and opportunities for collaboration. *Outcome: Dialogue with local business to identify common goals.*

## Year 2: 2015 - 2016

### **Course Offerings**

The 2015 - 2016 academic year offers courses to approximately 70 ninth grade, 60 tenth grade, and 40 eleventh grade students. At the ninth grade level all students are enrolled in Algebra II, Honors Chemistry, Honors Introduction to Literature, PE, Spanish, and Introduction to Engineering Design.

The elective option for high school begins a shift to a sequence of four courses incorporating Project Lead the Way curriculum beginning in 9th grade and ending in 12th grade.

At the tenth grade level, courses include Honors Precalculus, Honors Introduction to Literature and Composition, AP Biology, AP European History, Spanish or French 2, and Introduction to Engineering Design. Students will need to pick up PE as a virtual school option to provide room for the elective stream during the academic year. This choice can be exercised in any year except 9th grade.

Courses offered in the 11th grade are a choice between AP English Language and Composition or Honors American Literature and Composition, AP Chemistry, a second language (French or Spanish), a choice between Honors US History or AP US History, and Precalculus or AP Calculus. The elective will be Introduction to Engineering Design. A morning band program will continue for the high school students.

### **Instructional Components**

The priority for planning in 2015 - 2016 is to begin to address the need to deepen the learning experience of the student and leverage the opportunity to integrate new and relevant content across the subject areas. Course design began in 2014 to incorporate challenging and authentic topics related to STEM into the English language arts and history programs. The Big History Project offers a science centered approach to understanding humanity's place in the universe while incorporating and addressing the Common Core State Standards (CCSS) in English language arts. History topics of study will include the relevance of scientific discovery and its impact on civilization. Math courses will include C-STEM computer coding units.

Another important development in the 2015 - 2016 academic year is the proposed Capstone Advisory session designed to allow students time to collaborate and get advice on their Capstone Project each school day. This multi-year project is a critical culminating activity for the senior year and is necessary for students to graduate with the Scholars Diploma designation. The

advisory session will give students the opportunity to remain engaged in their research and seek out help on a daily basis.

A zero period senior band class may be offered for high school students prior to school start. This continues the current practice but will be exclusive to grades 9 through 11 and will be a smaller performance band.

The course offering of the 2015 - 2016 academic year begins to offer up innovative and engaging curriculum that departs from conventional studies. The pivot to a Project Lead the Way elective curriculum brings in a sequence of engineering studies that provides a balance to the foundational sciences and will develop skills that will support students in their Capstone Project. The following tasks have been identified:

- Add Capstone Advisory Session to the master schedule for all high school grades. *Outcome: Daily student support and collaboration with Capstone Project research and design.*
- Purchase and implement Project Lead the Way elective, Introduction to Engineering Design with supplemental art content for grades 9 through 11. *Outcome: Elective for 2015 - 2016, grade 9, 10 and 11.*
- Implement math units of study with integrated C-STEM computer coding. Provide professional development and teacher planning time. *Outcome: Math units of study integrated with computer coding instruction.*
- Implement history units of study integrating History of Science across all grade levels. *Outcome: History units of study integrated with history of science content.*
- Implement English language arts units of study integrating Big History Project content. *Outcome: ELA units of study accessing Big History Project content.*
- Proposed senior band class to the school day. *Outcome: Continuation of music instruction at the high school level.*
- Implement a virtual section of 10th grade PE for current 9th grade class to provide an elective opportunity in the master schedule, 2015 - 2016. *Outcome: Additional elective "Project Lead the Way" Introduction to Engineering Design.*

## **Facilities**

Following the short term term plans for campus growth drafted by LPA, portable classrooms will be placed to house the 11th grade. Ensuring functionality of the existing campus facilities and temporary classroom structures placed on site will require careful planning and ongoing adjustments. Planning priorities are focused on maintaining a positive academic environment and facilitating student movement between classes and providing an efficient breakfast and lunch routine. A careful assessment of supervision needs will be required.

Long term planning for the permanent campus configuration will be driven by the site assessment process. Securing funding for the construction of new facilities will need to be considered. Tasks to be completed include:

- Place 2 portable science laboratory classrooms on site. *Outcome: Classroom space for two additional sections of 11th grade.*
- Place an additional portable for Studio Lab. *Outcome: Studio Lab for 2015 - 2016 academic year.*
- Expand, realign, and stripe the lower parking lot to accommodate additional traffic and relieve congestion during student drop off and pick up. *Outcome: More parking space and efficient traffic flow.*
- Initiate funding process for permanent campus construction. *Outcome: Bond measure for November ballot.*

## **Staffing**

Staffing for the 2015 - 2016 year will consist of full time English language arts, chemistry, math, second language, history, and electives teachers. Changes from the previous year are the expansion of history to full time and the addition of a new elective teacher for Project Lead the Way. Part time assignments will remain for AP biology, math and English language arts, and VAPA. Extended day opportunities may be available for math and English. The VAPA assignment will also be an extended day opportunity but may require a shared position from another school site.

Additional administrative support is included with the addition of a Teacher On Special Assignment for 60% administrative and 40% teaching, and increasing the counselor position to full time. The planning and development of the new high school program and campus facilities, in addition to the day to day management of a unique campus, requires additional coverage for administrative duties. A part time position will provide the necessary support. As students approach graduation additional support for college planning will increase the workload on the counselor position. Tasks to be completed:

- Hire a full time elective teacher credentialed to teach the Project Lead the Way curriculum. *Outcome: Project Lead the Way curriculum offered at all grade levels.*
- Resolve part time assignments for English and math. *Outcome: Full coverage for teaching assignments in English and math.*
- Hire a Teacher On Special Assignment for 60% administrative duties and 40 % classroom teaching. *Outcome: Administrative coverage to support high school planning and program development.*
- Increase half time counselor position to full time to meet student and administrative needs. *Outcome: Full counseling services for a variety of student needs, grades 5 - 12.*

- Increase part time attendance clerk to full time. *Outcome: Administrative support for school operations.*
- Increase campus supervision staff by 1 to provide full supervision of students. *Outcome: Complete supervision of campus space utilized by students during passing period and breaks.*

## **Program Development**

Progressive development and innovation requires a robust planning cycle with mechanisms to respond to stakeholder needs and satisfaction. Regular sessions that engage the design process in addressing the needs of the instructional program and respond to guidance from the Steering Committee need to be scheduled into the routine of school leadership functions. Partnerships are a critical component of the high school development process. Goals for the high school include close collaboration with higher education to provide not only the mentorship program and guidance currently in place, but to incorporate college credit options for Riverside STEM Academy courses and provide access to college based courses for STEM students. A formal dialogue is needed between District leadership and leadership at the various higher education institutions to draft agreements that address options to extend learning opportunities and achievement recognition for students. Tasks for consideration include:

- Schedule monthly design team meetings to respond to Steering Committee guiding statements and identify opportunities for program modification. *Outcome: Responsive planning cycle to refine and improve teaching and learning.*
- Implement a strategy for engaging higher education institutes in formal agreements and setting common goals. *Outcome: Partnership agreements with higher education institutes to formalize common goals, access to college credit, access to college courses.*
- Implement a strategy for engaging the business community and establishing common goals and opportunities for collaboration. *Outcome: Partnership agreements with local business to define common goals and facilitate collaboration.*

## Year 3: 2016 - 2017

### **Course Offerings**

The 2016 - 2017 academic year offers courses to approximately 70 ninth grade, 70 tenth grade, and 60 eleventh, and 40 12th grade students. At the ninth grade level all students are enrolled in Algebra II, Honors Chemistry, Honors Introduction to Literature, PE, Spanish, and Introduction to Engineering Design. The elective option for high school continues a shift to a sequence of four courses incorporating Project Lead the Way curriculum beginning in 9th grade and ending in 12th grade.

This year 10th grade students will be enrolled in Principles of Engineering. The other academic courses at the tenth grade level include Honors Precalculus, Honors Introduction to Literature and Composition, AP Biology, AP European History, Spanish or French 2, and Principles of Engineering. Students will need to pick up PE as a virtual school option to provide room for the elective stream during the academic year. This choice can be exercised in any year except 9th grade.

Courses offered in the 11th grade are a choice between AP English Language and Composition or Honors American Literature and Composition, AP Chemistry, a second language (French or Spanish), a choice between Honors US History or AP US History, and Precalculus or AP Calculus. The elective will be Principles of Engineering. A morning band program will continue for the high school students.

Senior year courses are comprised of a choice between AP Physics 1 or AP Physics C, Principles of Engineering, AP Statistics, a choice between AP Literature and Composition or English Literature and Composition, AP Government and Economics or Honors Government and Economics, and AP Environmental Science.

### **Instructional Components**

By 2016 - 2017, the instructional program is firmly in place and will produce the first graduating class of Riverside STEM Academy High School. Seniors will present and defend their Capstone Project as a requirement for receiving the Scholars Diploma. C-STEM computer coding will continue to be integrated into units of study in math, Big History Project content will be integrated into English language arts. Interdisciplinary collaboration and instructional alignment will remain a focus of curriculum development. Tasks to be completed include:

- Implement Project Lead the Way elective, Principles of Engineering in the 11th and 12th grade. *Outcome: Three year elective course progression in engineering and design.*
- Implement 12th grade academic course offerings. *Outcome: A comprehensive and integrated high school instructional program.*

## Facilities

The 2016 - 2017 academic year requires the final addition of classroom space to accommodate the short term program servicing two sections of students per grade level with temporary structures. As itemized in the LPA plans, three buildings will be added to the site, one classroom and two locker rooms. The existing locker rooms will be converted back into regular classrooms and, with the new addition, will create a cluster of five classrooms at the mid level. The two new locker rooms will be located adjacent to the sports field on the upper level of the campus. Plans for the long term campus rebuild including completion of the site analysis and securing funding will be ongoing. By year end a clear vision of a facility that meets the needs of a full STEM program at the Mt. Vernon site will be finalized. Task to complete include:

- Submit a bond measure that includes funding that supports the construction of a long term STEM facility at the Mt. Vernon site. *Outcome: Facilities that meet the needs of a long term STEM education program.*
- Complete long term planning for facilities design and site analysis. *Outcome: A campus and facilities design that meets the needs of a grade 5 through 12 STEM instructional program.*
- Addition of one classroom and two locker rooms with student restrooms. *Outcome: Final installation of short term classroom facilities.*

## Staffing

Staffing will continue to grow with the addition of 12th grade. Full time positions are created for biology/ AP environmental science, math and physics. Part time positions remain for English language arts and foreign language. A majority of the teaching position will be full time, providing a stable core of teachers committed to the long term STEM program and able to engage in building an integrated, challenging curriculum. Tasks to be completed:

- Increase part time teaching positions in biology, math and physics to full time. *Outcome: Full coverage of teaching assignments.*

## Program Development

Planning priorities will turn to identifying opportunities to expand and deepen student learning by providing personal choice, a greater variety of educational options, and direct linkages to real world research and design problems. The steering committee will be tasked with looking forward and extending the planning horizon to identify the opportunities provided by a rebuilt campus, investigate ways to modify the master schedule and leverage the integration of content



across subject areas. Planning outcomes will become more transformational and unique as the steering committee responds to the needs of students and strives to meet program goals. The design process will continue to be implemented by school leadership to respond to guidance from the steering committee and redirect resources and effort to continue improving the instructional and extracurricular programs, grade 5 through 12.

Formal partnership agreements with higher education will forge relationships and set out common objectives to guide allocation of resources, identify opportunities to improve the educational experience of students, and fulfill mandates for community involvement. Similar agreements will be sought with business interests and agencies at the municipal, county, and state levels. Tasks to be considered are:

- Continue quarterly Steering Committee meetings to realign the instructional program as needed. *Outcome: Responsive planning cycle that adjusts to changing needs and improves student learning.*
- Build capacity in implementing the design process through professional development and cultivating an engaged, motivated staff. *Outcome: Creative and innovative instructional program tied to institutional vision and mission.*
- Finalize formal agreements with higher education institutes defining roles and responsibilities for contributing to the teaching and learning of STEM students. *Outcome: Partnership agreements with higher education institutes to formalize common goals, access to college credit, access to college courses.*
- Finalize formal agreements with business groups defining roles and responsibilities for contributing to the teaching and learning of STEM students as well as connecting students to the greater community. *Outcome: Partnership agreements with local business to define common goals and facilitate collaboration.*
- Identify opportunities for partnership and collaboration with municipal and county agencies that support the mission and vision of the Riverside STEM Academy. *Outcome: Additional resources and support contributing towards an innovative and progressive instructional program.*

## Year 4: 2017 - 2018

### **Course Offerings**

Few changes in course offerings are planned for the 2017 - 2018 academic year. The next course in the Project Lead the Way elective stream, Computer Science and Software Engineering, will be added for 11th and 12th grade. However, course modifications and curriculum integration will continue in response to the design process and recommendations from the Steering Committee.

### **Instructional Components**

The planning cycle and design process are focused on continuous improvement of the instruction provided at Riverside STEM Academy. It is recognized that the structure of the instructional day has a great impact on what and how learning is achieved. Modification and personalization of the daily schedule is a strategic focus for innovation of instruction and will be considered as the school transitions to a new campus configuration. Tasks for consideration are:

- Implement 12th grade Computer Science and Software Engineering elective. *Outcome: Addition of third elective option for 12th grade.*
- Prioritize innovation in master scheduling and exploring alternative models through the planning process. *Outcome: Improved utilization of the instructional day and increased student learning.*

### **Facilities**

Redevelopment of the Riverside STEM Academy campus will begin. Construction plans will be required for the campus that consider the safety and movement of students. Given the size of the campus, management options will be constrained.

### **Staffing**

Staffing will remain constant until completion of the redevelopment of the campus. Operational factors such as staff turnover and credential alignment will continue to be addressed. The next addition of staff will follow completion of the campus redevelopment and the high school grades expand to 3 sections per grade level, the long term goal for student enrollment.

## Program Development

Program development will continue to be driven by the planning and design process. Full engagement of the Steering Committee coupled with robust stakeholder feedback and student achievement data will provide up to date information on which to base future decisions and allocation of resources. The focus of program development will continue to be on articulation of instruction across grade levels, finding opportunities for students to connect their learning with real world situations, and providing an authentic and rigorous learning environment.

Partnerships with business, higher education, and government agencies will continue to be forged and leveraged to provide enrichment opportunities and accelerate the academic growth for students. Exploration of service learning opportunities that align with the mission and vision of Riverside STEM Academy are to be prioritized and a service learning plan for the full grade 5 through 12 program be developed. Additional opportunities for multi-grade, student to student mentorship and collaboration should be a component of the plan. Tasks for consideration include:

- Identify service learning opportunities and develop an implementation plan, grade 5 through 12. *Outcome: A student service learning program aligned with partnership goals and objectives.*

## Year 5: 2018 - 2019

### **Course Offerings**

Few changes in course offerings are planned for the 2018 - 2019 academic year. The next course in the Project Lead the Way elective stream, Engineering Design and Development, will be added for 12th grade. Graduates will have the option to complete 4 consecutive years of engineering content. Course modifications and curriculum integration will continue in response to the design process and recommendations from the Steering Committee.

### **Instructional Components**

The planning cycle and design process will continue to focus on improvement of instruction provided at Riverside STEM Academy. Recommendations for the modification and personalization of the daily schedule will be considered and implemented as the school prepares for a transition to a new campus configuration. Tasks for consideration are:

- Implement 12th grade Engineering Design and Development elective. *Outcome: Addition of fourth and final elective option for 12th grade.*
- Implement recommended innovations in the master schedule. *Outcome: Improved utilization of the instructional day and increased student learning and achievement.*

### **Facilities**

Redevelopment of the Riverside STEM Academy campus will continue. Construction plans will be monitored and modified when necessary in consideration of the safety and movement of students. Given the size of the campus, management options will be constrained.

### **Staffing**

Staffing will remain constant until completion of the redevelopment of the campus. Operational factors such as staff turnover and credential alignment will continue to be addressed. The next addition of staff will follow completion of the campus redevelopment and the high school grades expand to 3 sections per grade level, the long term goal for student enrollment.

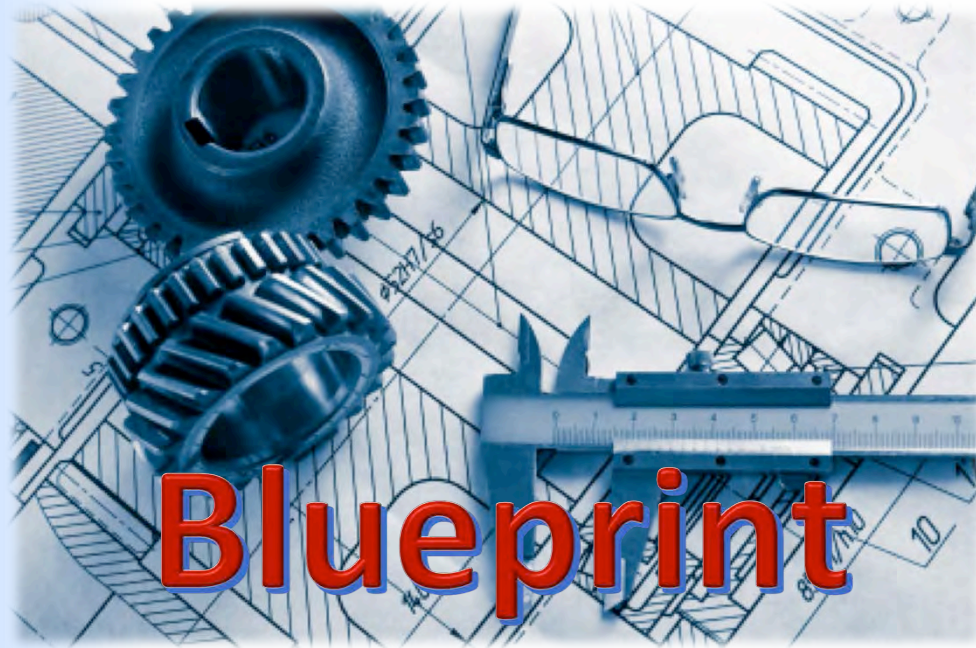
### **Program Development**

Program development will continue to be driven by the planning and design process. Full engagement of the Steering Committee coupled with robust stakeholder feedback and student

achievement data will provide up to date information on which to base future decisions and allocation of resources. The focus of program development will continue to be on articulation of instruction across grade levels, finding opportunities for students to connect their learning with real world situations, and providing an authentic and rigorous learning environment.

Partnerships will be utilized to implement a service learning strategy that connects Riverside STEM Academy students with the greater community. The strategy will include mentorship and collaboration opportunities for students across grade levels. Students will develop a sense of belonging to a wider community while cultivating relationships within the school that generate a common STEM identity. Tasks for consideration include:

- Implement a service learning plan that connects students to the greater community and forges a common identity among classmates. *Outcome: Community minded students with a greater sense of contributing to common goals.*



**For the Future**

# **District-wide STEM**

## **Planning Meetings**

**January 14, 2015**

**February 17, 2015**

**March 18, 2015**

**April 15, 2015**

# Study Session Objectives

- Review STEM High School Growth Plan
  - Program
  - Facilities
- Address questions



# A Brief History



# Planning to Date

- RSA opened in 2011 with 200 students grades 5-8
- In February 2014, discussion and research ensued toward the development of a long-term plan
- As a result an Ad Hoc Committee was convened in Spring 2014
- Directional Statements were subsequently provided to the Board in July 2014

# **Ad Hoc Committee**

## ***Directional Statements***

- We want our STEM school to be a 5-12 school
- We want the vision and mission statements to pertain to the entire 5-12 school
- We want our school to be located close to a school of higher education
- We want our 5-8 students and our 9-12 students to share the same school site

# **Ad Hoc Committee**

## ***Directional Statements***

- We want our school to be small
- We will create a small, interdisciplinary, personalized, research-based environment for our high school students
- We will offer our high school students the same flexibility we currently offer our 5-8 students
- We will offer our high school students A-G programs, even if some of those classes must be taken online

# Ad Hoc Committee

## *Directional Statements*

- We recognize that we cannot offer our students every extra-curricular option that traditional high schools do, so we will have unique choices of VAPA and sports options
- We will discuss whether AP classes have a place in this new environment
- We will grow our campus at the Mount Vernon site, with portables and improvements
- We will ask that a new STEM school be placed on the list for the next General Obligation Facilities Bond

# The Opportunity



**Discovery &  
Wonder**



**Rigor of a  
STEM Degree/  
Career**

# STEM Majors

More than 60% of college freshmen intending to major in a STEM field fail to complete college with a STEM degree.<sup>1</sup>

Interest in STEM majors has increased, but rates of persisting in STEM majors have not improved.<sup>2</sup>

College freshmen often enter college unprepared for the rigors of STEM and fail introductory science and math courses.<sup>2</sup>

<sup>1</sup> *A Report by the President's Council of Advisors on Science and Technology*, February 7, 2012

<sup>2</sup> *College STEM Majors Opting Out for Other Degrees*,<sup>36</sup> USA Today, September 19, 2013

# The Mission

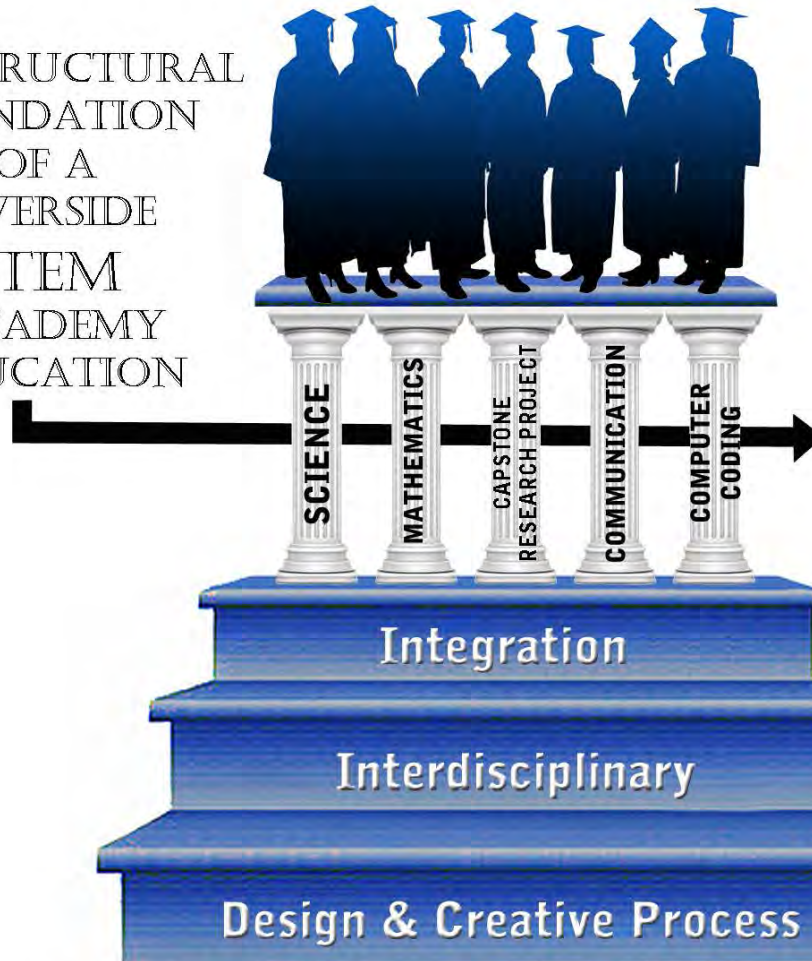
Riverside STEM High School's mission is to provide students a collaborative, technological and innovative structure for deep scientific and mathematical literacy, emphasizing critical thinking, problem-solving, and effective communication skills with an interdisciplinary focus.



# The Vision

We prepare students to excel  
in STEM fields of study and  
succeed in 21st century careers  
as leaders and innovators.

THE STRUCTURAL  
FOUNDATION  
OF A  
RIVERSIDE  
STEM  
ACADEMY  
EDUCATION



Problem Solvers  
Innovative  
Persistent  
Creative  
Ethical  
Collaborative  
Self-reliant  
Historically and  
globally aware

LEADING TO A STEM POST-SECONDARY DEGREE AND CAREER

# The RSA Experience

## All students experience

- an accelerated learning progression
- a fully integrated and articulated STEM pathway grades 5 – 12
- a small school environment
- STEM speaker series

# The RSA Experience

All students graduate with

- a Scholar's Diploma
- 4 lab sciences including Physics
- 4 math courses including AP Calculus AP Statistics
- a completed Science or Engineering Capstone Research Project

# The RSA Experience

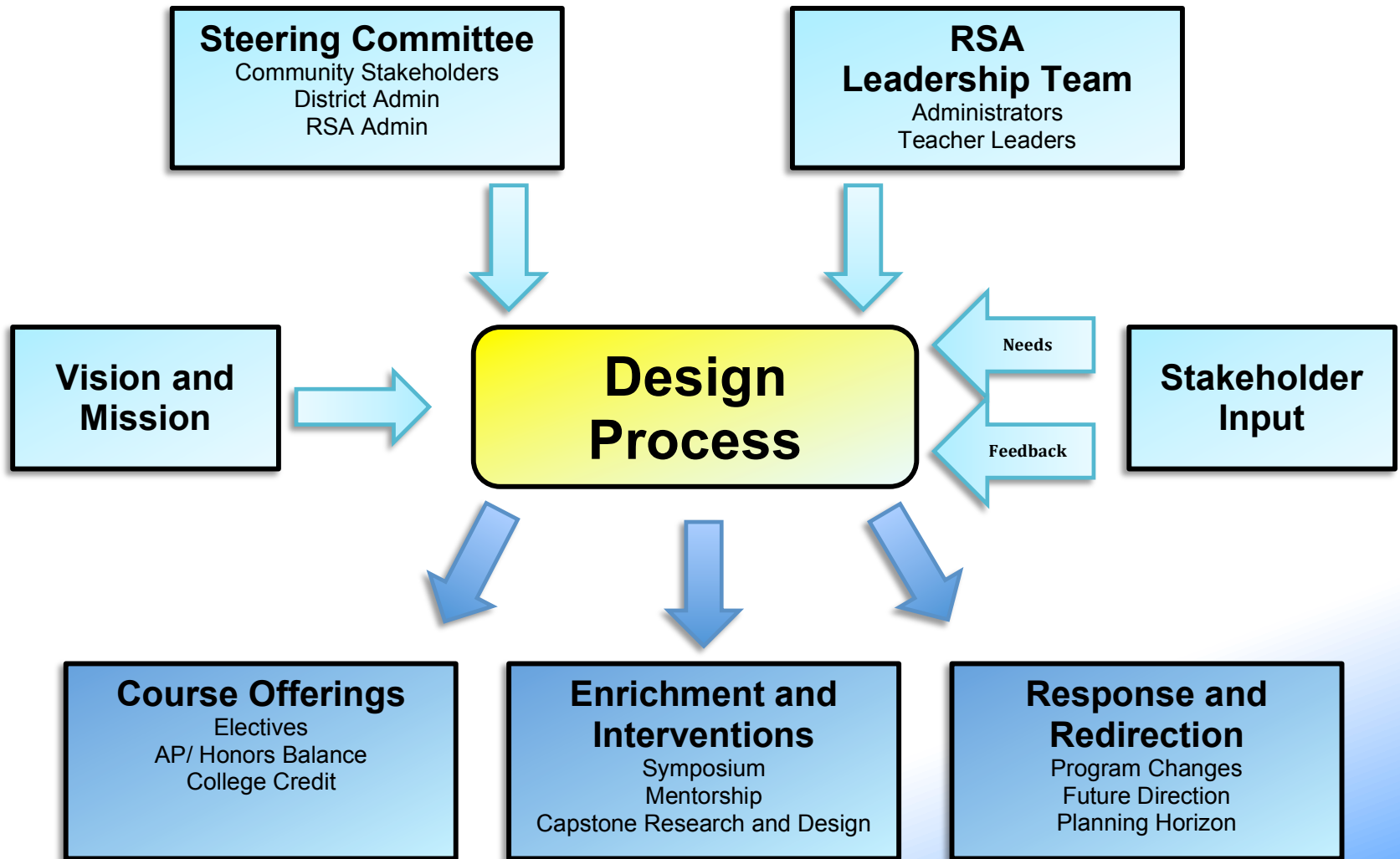
Enhanced community partnerships with

- STEM businesses
- higher education institutions
- municipal agencies
- international STEM institutes

# The RSA Experience

All teachers collaborate

- across grade levels
- across subject areas
- formally once a week
- informally all the time
- with administrators in a design process



# Parent Input

- Tier 1 Priority
  - Hire innovative, passionate teachers and staff
- Tier 2 Priorities
  - Foster a unique STEM school culture
  - Expect well-rounded students
- Tier 3 Priorities
  - Provide flexible science labs
  - Offer student support and intervention
  - Partner with higher education institutions



# Student Input

- Experience a well-rounded program
- Academic and extracurricular options
- High school space distinguishable from 5-8

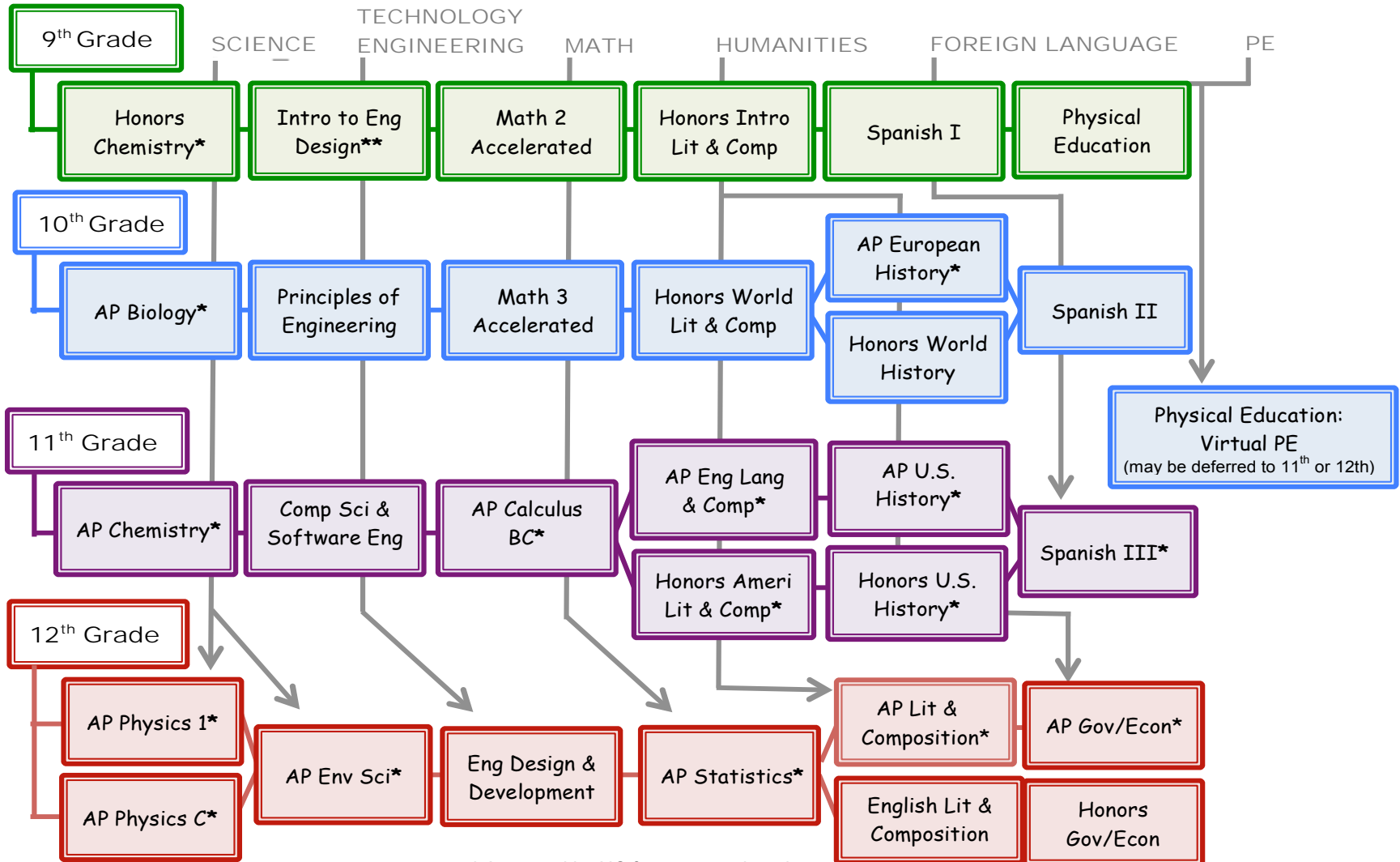
# Staff Input

- HS Design Team planning meetings
- Regular input from all RSA teachers

# **New to the RSA High School Program starting 2015-16**

- Academic options in grades 10-12
- Technology & engineering courses
- Integration of computer coding in math
- STEM Lab (after school tutoring support)
- Studio-Design Lab (makerspace)
- Advisory session (pending faculty approval)

# Academic Program



\* Approved by UC for extra grade point

\*\* Receives VAPA credit with the Ca PLTW Supplemental Art Curriculum integrated into the course

# Enrollment

Year	Grade 9	Grade 10	Grade 11	Grade 12	Total
2014 - 2015	69	49	0	0	118
2015 - 2016	70	60	40	0	170
2016 - 2017	70	70	55	40	235
2017 - 2018	70	70	70	55	265
2018 - 2019	70	70	70	70	280

# Staffing Additions

2015 - 2016	2016 - 2017	2017 - 2018	2018 - beyond
<ul style="list-style-type: none"> <li>• <b>Teacher staffing increases as needed</b></li> <li>• <b>60% TOSA admin. support</b></li> <li>• <b>Counselor- Increase to 1.0 FTE</b></li> <li>• <b>3<sup>rd</sup> Campus supervisor</b></li> <li>• <b>School Office Assist-part time</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Teacher staffing increases as needed</b></li> <li>• <b>Increase TOSA to 100% admin. support</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>TOSA changes to Asst. Principal</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Staffing increases as enrollment increases</b></li> </ul>

# Future Considerations

- Personalized learning
- Blended classrooms
- Design-Studio (makerspace)
- Modified schedule

# Partnerships

Recognized need to develop partnerships

- Demonstrated by STEM school visits
- Play a key role in the *Design Process*
- College credit opportunities



# Partnerships

## Partnership relationships with

- University of California, Riverside
- California Baptist University
- Riverside City College
- Western Municipal Water District
- Southern California Gas Company
- Riverside city leaders

# Riverside STEM Academy Facilities Planning

- Short-term facilities planning
  - 2015/2016 & 2016/2017
  - Facilities cost estimates
- Long-term facilities planning
  - Feasibility study & conceptual plan
  - Future Bond measure



# 2015 – 2016 Short term growth

2015-2016 – Add 11<sup>th</sup> Grade  
(approx. 60 students) + Expand  
Parking

Project Cost Estimate: \$1,064,000

Add (2) 36x40 Science Lab Portables

Reconfigure Entry, Drop-Off and  
Add Parking (27 stalls)

HS  
MS



# 2016 – 2017 Short term growth



Add (1) Classroom Portable

2016-2017 – Add 12<sup>th</sup> Grade (approx. 60 students)  
Project Cost Estimate: \$1,097,250

Add (2) Locker Room Portables  
Convert Existing Locker Rooms into Classrooms

HS  
MS



# Feasibility Study & Conceptual Plan

- Environmental Studies - CEQA
- Topographic Survey/ Base Map
- Geologic Studies - Hazards/ Soil Conditions
- Incorporate Visioning Concepts in the Development of Feasibility/ Conceptual Plans
- Cost Estimate: \$300,000



HS  
MS

# Teachers

**Catherine Murray**

*Riverside STEM Academy*

*High School ELA Teacher*

**Michele Hampton**

*Riverside STEM Academy*

*High School Science Teacher*

# Student

**Sophia Bautista**

*Riverside STEM Academy  
High School ASB President*

# Parent

**Lisa Aguirre**

*Riverside STEM Academy*

*Four-Year RSA Parent*



# Questions From the Board

