

May 21, 2014

Science Leadership Academy @ Beeber

Chris Johnson, Principal

Family Night

Leadership Team

William R. Hite Jr., Superintendent

Paul Kihn, Deputy Superintendent



The School District of Philadelphia School Reform Commission

William J. Green, Chair

Farah Jimenez, Member

Feather Houstoun, Member

Wendell E. Pritchett, Member

Sylvia P. Sims, Member

A Message from the Founder

To the Science Leadership Academy @ Beeber Class
of 2018,

Welcome!

We are so thrilled that you have chosen to join the second class of students and families to come to Science Leadership Academy @ Beeber!

Tonight is your first of many experiences as an official member of our community of two amazing schools. SLA @ Beeber was created for you - because so many families have advocated for a caring, inquiry-driven, project-based modern education for their children. SLA @ Beeber represents the best of those ideas made whole in our school. I want to thank you and celebrate your choice to help us build a school that will offer a profound and transformative education for Philadelphia students.

Tonight you will meet the incredible teachers and students of our school, and between their ideas and excitement and the information contained in this booklet, we hope that you are able to deepen your understanding and excitement for the kind of teaching and learning that you will experience over the next four years.

We are so excited that you are joining our community at Science Leadership Academy @ Beeber. The families of our school come from all over our city, representing over sixty schools from every neighborhood. And tonight begins the process of taking this diverse group of students, families and teachers to become one strong community of learners and citizens.



Yours truly,

Chris Lehmann



To the Students and Families of the Class of 2018:

Greetings,

Congratulations! We are excited to have your family join our team and the class of 2018. The first year of the high school experience can be exciting as well as nerve racking. It is a time of major adjustments, not only for the students, but also for the parents. I am confident that with the support of our school and community, the transition will be smooth for your family.

It is an exceptional night this evening. A few years ago, Christopher Lehmann started SLA in an attempt to provide Philadelphia students with a viable alternative to traditional schooling. Fortunately, his vision and leadership was one that had to be replicated so more students could participate in such a great educational atmosphere. To that end, Mr. Lehmann decided to start another campus of SLA.

Thanks to all the special people who joined us here today, we are able to celebrate our second year of existence!

Tonight is about enjoying you, learning about the SLA experience and meeting our new family members. Ask questions, talk to people, look around, be inquisitive, explore! You, parents and students, have worked for this opportunity. Lets have conversations that are of the unscripted nature that fosters inquiry.

Enjoy tonight!

Warmly,



CJ

Mission and Vision of the Science Leadership Academy

“How do we learn?”

These three essential questions form the basis of instruction at Science Leadership Academy (SLA), a new Philadelphia high school opened in September 2006. SLA is built on the notion that inquiry is the first step in the process of learning. Developed in partnership with The Franklin Institute (TFI) and its commitment to inquiry-based learning, SLA provides a rigorous, college-preparatory curriculum with a focus on science, technology, mathematics and entrepreneurship. Students at SLA learn in a project-based environment where the core values of inquiry, research, collaboration, presentation and reflection are emphasized in all classes.

“What can we create?”

The structure of SLA reflects its core values, with longer class periods to allow for more laboratory work in science classes and performance-based learning in all classes. In addition, students in the upper grades have more flexible schedules to allow for opportunities for dual-enrollment programs with area universities and career development internships in laboratory and business settings, as well as with TFI.

“What does it mean to lead?”

At SLA, learning is not just something that happens from 8:15am to 3:05pm, but a continuous process that expands beyond the four walls of the classroom into every facet of our lives.

What Makes SLA Different

SLA classes look and feel different than those of more traditional educational environments. Visitors comment on the high level of student engagement. SLA classrooms buzz with activity. The spirit of inquiry, upon which the school is founded, generates this atmosphere. In addition to our five core values, classrooms reflect three distinct - but interconnected - components of teaching at SLA: inquiry-driven, project-based learning; backward design of the curriculum; and 1:1 (laptop-to-student) based instruction.

In addition to regular work, SLA teachers identify special projects each quarter known as Benchmarks. For these major projects, the faculty uses a common rubric tailored to their particular subject. Benchmarks are assessed on their design, knowledge, application, presentation, and process. Thus, SLA teachers are able to identify areas of growth and challenge for each individual student and shape their teaching in order to address areas of learning that need to be remediated. Student projects generate more student interest and involve multiple steps and drafts. They often require a great deal more effort than studying for a test.

Projects at SLA are different than those at traditional schools. The key to this difference lies in a concept called Backward Design. Teachers ask, "What are the enduring understandings students should have when they leave this class?" Teachers then create projects that can only be completed by showing both the skills and knowledge deemed to be critical to master the subject and demonstrate a deep level of understanding.

The day in and day out classes then become a series of exercises to make sure students have the tools to do the work required. This is why the design is backward. The outcome is pictured first, and the content is created to best enable students to reach the set goals. In short, in a traditional classroom, students might do many small projects along the way, but the final assessment of student progress is measured by a test. At SLA, there may be multiple assessments – including quizzes and tests – along the way, but the primary assessment of student learning is through their projects.

The final component of what makes SLA classes different is the 1:1 laptop environment. This creates the ability for students to incorporate a world of knowledge into their projects. Textbooks are sometimes used, but teachers usually want students to search for answers outside of the confinement of a single source. Classes at SLA often take the form of students working with one another in small groups with their laptops open. Instead of being at the front of the room, the teacher floats from group to group providing ideas and support for students to complete their assigned tasks. The one to one environment means each student is responsible for topic inquiry and ultimately the presentation of their findings. Thus, each student has the ability and responsibility to show what he or she knows in the most sophisticated manner possible. Just as there are not a set number of right answers to earn a passing grade for students who struggle with the material, there are also no limits for those who are truly talented in that subject area. Differentiated learning (teaching to the ability and needs of each student) becomes inherent.

SLA Summer Institute

Week of August 26-28, 2014
9am-12pm Tuesday-Thursday

At Science Leadership Academy, we understand that the transition into high school can be a difficult one. We are pleased to offer a one-week Summer Institute this August, to ease that transition and allow our students and faculty to begin forging bonds as a learning community – before the “hard work” of the classroom begins.

Led by faculty and upper-class students, this one-week orientation has two goals, the first is to begin the process of bringing them into the unique, diverse SLA community. To that end, students will spend part of the time in their Advisory Groups, getting to know the students and teachers who will be a part of their community from their first day at SLA through graduation and beyond.

Second, the week is built around our philosophy of student-driven, hands-on, project-based learning. We want to introduce our students to SLA’s core values from the start, and get students acclimated to the high expectations we have for their high school careers. Using TFI and other Philadelphia sites as their “classrooms,” students begin working to explore a variety of questions and problems relating to their surroundings and their place within it. Our students practice the art of “seeing in new ways” as it relates to the process of observation, analysis, and interpretation. Students will return to our Beeber campus

During Summer Institute, students ultimately work to create a collaborative project to present to their classmates, while, at the same time, establishing positive relationships and a sense of themselves as first-year SLA students. It is an exciting, enriching, and energizing way to gear up for the year.

See you in August!



Summer Reading 2014

Dear Incoming Ninth Grader,

Welcome to SLA! Before coming to school in September we'd like you to read one of the following books: Ender's Game (Orson Scott Card), House of the Scorpion (Nancy Farmer), or Hunger Games (Suzanne Collins).

While you may get the book from the library, we strongly suggest that you purchase your choice text, as we will be using it in English classes in September. We are selling all three titles at discounted prices on New Family Night to make obtaining summer reading easy and effortless. Of course, feel free to read more than one title! They are all so great!

Below are some questions to help you navigate your novel and help you prepare to discuss it with your classmates and teachers. As you may already know, SLA utilizes guiding questions that help focus our studies and make learning more meaningful for us all.

As you read each book, think about the following larger questions as they apply to the characters, action, conflicts, and resolutions in your choice text and also as they apply to your life. Part of active reading includes some writing. Prepare to hand in a journal consisting of at least eight entries, each one longer than a half page. Before you write, consider the following questions to explore in your journal. Include your own personal responses to these questions, and how these questions might apply to your choice text. This will be collected in September. You must complete a journal for both books you select.

- What is family?
- What is the power of friendship?
- What does it mean to be a caregiver/mother/father?
- What is education and where can it exist?
- What is love?
- How does a person become evil?
- * In what ways can the line between good and evil be blurred?
- How do you justify the idea that a person can be both good and evil at the same time?
- Who is a survivor? Why?
- What does it mean to be human?
- * How can children create their own paths in a world run by the adults?

“I am most proud of the growth and continuing need to learn at this school.”

- Christopher Loftus,
SLA Graduate



The Mini-Course Experience

9th Grade Enrichment Workshops with Community Partners

SLA's 9th graders engage in informal Project Learning called mini courses. These courses are held every Wednesday afternoon between 1:30 and 3:00pm. The courses run for 8 weeks and are offered 4 times a year. The workshops serve as a pedagogical tool to enhance the students' level of understanding about the world they live in. These courses lay the foundation for an engaged and exciting four years of partnered learning with the Science Leadership Academy and other community organizations.

Mini-courses are led by community partnerships with experts in their respective fields or have areas of interest they would like to share with students in the form of a project. These courses are free to explore different content and fields which focus on:

1. Sharing the most exciting aspects of Science, Technology, Engineering, Arts and Math, including its wonders and applications, to inspire a passion for learning.
2. Process over content (i.e. critical thinking and problem-solving over content areas like biology or physics.)

The goal is for students to work on a project with experts to create something meaningful by the end of the 8 weeks. From working with circuits to creating poetry to programming a website; the options are limitless!



Individualized Learning Plan

Real-world experience for the 10th and 11th Grades

The Individualized Learning Plan (ILP) Program prepares students to enter adulthood by giving them the opportunity to develop and answer questions about their career goals, gain real experience working with adult mentors in the working world and expand the classroom into the city of Philadelphia.

Tenth and eleventh grade students write their own ILP learning goals focusing on an area of personal interest and they select a site where they can achieve their goals. Students dedicate time Wednesday afternoons to their ILP.

The ILP Program is partnered with more than 100 site hosts throughout the city including universities, museums, hospitals, small businesses, K-8 schools and community organizations.

Students' experiences are as varied as the partners who host them. Through the ILP Program, students have volunteered at the Veterans Affairs Hospital, The Franklin Institute, the Mutter Museum, the Academy of Natural Sciences. Students also volunteer at law offices, day cares and K-8 schools throughout Philadelphia.

Senior Capstone Project

A 12th Grade culmination of studies

The Capstone Project at SLA is an opportunity for students to demonstrate the culmination of their intellectual growth in high school. The capstone represents a synthesis of the SLA mission and vision as students attempt to answer the questions: "How do we learn?" "What can we create?" and "What does it mean to lead?" through a self-selected and designed independent project. As with everything we do, the projects embody SLA's core values. The final product will look different for each student, just as each student has a unique perspective and approach to learning.

Through the Capstone Project students leave SLA with an original piece of work showcasing the students' skills of inquiry and investigation of a topic of interest. During their four years at SLA, students move towards an independent and self-directed learner who can contribute meaningfully to his or her community. Together with their capstone advisory panel, students have the freedom to design a project that reflects their unique, individual interests. Students adopt an interdisciplinary approach and demonstrate a complexity of thought about their chosen topic, both during the proposal phase and as they begin to execute the project.

Advisory Curriculum

At its root, Advisory is the soul of SLA. Advisory is a four-year relationship between a teacher, twenty students and their parents that ensures that every student in the school has an advocate – one teacher to whom they know they can always go for help. For parents/guardians, Advisory is a pipeline to the school. It gives them a point person for communicating with the school. In addition, there are two report card conferences each year at which parents, advisors, and students can address academic and social achievements and challenges. Advisory programs promote healthy student development, support academic and personal success, and provide an ideal setting to teach and practice important life skills. At SLA, one of the major goals of the freshman year advisory program is to help ensure each student has a healthy, productive and enjoyable transition to high school. For students, it is a time of searching inwardly to find who they are and searching outwardly to find their place as a member of a new community. Students learn best when they have a sense of community, feel heard and known, and feel safe enough to take risks. Many students will be challenged academically for the first time and will need to quickly develop skills to ensure a successful high school career.

In the upper grades, the advisory program continues to support students' academic and personal development, with an emphasis on assisting students with their ILP and post-secondary planning. Advisors collaborate with the ILP coordinator and guidance counselor to ensure that students successfully complete their internship programs and guide students through the college admissions process. Advisory class meets twice per week for 40 minutes. Students are given school-related information and have the opportunity to participate in discussions, exercises and activities that assist them in developing competencies critical to achieving optimal academic and personal success.

The Advisory curriculum topics:

- School orientation - Adjustment to new school, school design, acquaintance with school community and scheduling issues
- Academic skills support - Goal setting, study skills and time management
- School spirit - Communication and implementation of student government initiatives, athletics, academic contests, and club promotion
- Peer relations and effective social skills - Discussions on adolescent issues (coping strategies, bullying prevention, self-esteem building, and good decision making)
- Career exploration - Interest inventories, research, projects, interviewing, and resume writing
- Current events - Philosophical inquiries, discussions and reflections on issues that affect and shape our thinking

“Advisory is like a second family at school. Your classmates are involved in your life and your advisor is like a second parent.”

- Sabrina Stewart-McDonald SLA student

Advisory Curriculum, Cont'd

Benefits to the students:

- Increases likelihood of academic success.
- Personalizes students' educational experience by having a four-year relationship with a caring adult.
- Gives students space where they can interact with their advisors and each other as people, outside of the demands of a subject-specific curriculum.
- Ensures that every student has at least one adult in the building who they know will serve as their advocate.
- Allows students to participate in discussions on topics that may not be covered in their academic subjects, but are nonetheless important for their development of self-concept, identity, values and character.
- Provides students an opportunity to learn important academic and interpersonal skills that are critical to success.
- Individualized attention to the development of career awareness and post-secondary planning.

Benefits to the parents:

- Allows parents to build a four-year relationship with an advisor who knows their child well.
- Gives the parents a point person in the school community who can help them with questions about their child's academic progress.
- Provides a smooth parent-advisor conference as opposed to having brief meetings with multiple teachers.
- Assures parents that a caring and concerned adult will respond to visible changes in their child's attitude and behavior.
- Increases communication between home and school.

Benefits to the school:

- Positive relations between students and teachers.
- Increase sense of trust and belonging.
- Promotes better communication among all members of the school community.
- Creates a strong atmosphere of equality.
- Reduces student engagement in risky behavior.
- Provides support and serves as a resource for students who need extra guidance.



Science Curriculum

Science Curriculum Aim

The science curriculum is driven by SLA's core values:

- Inquiry: Students will learn how to ask good questions
- Research: Students will design experiments based on the scientific method
- Collaboration: Students will work together to gather data and compare results
- Presentation: Students will use of variety of strategies to share their research
- Reflection: Students will consider how their research can be used to extend inquiry

Reflection is one of the most important aspects of the science curriculum at SLA. Reflecting on our work helps us see how the different fields of science - such as biology, chemistry, and physics - are interrelated. Reflection is also important as we examine how science is useful when integrated with other subjects such as history, math, and language studies. Finally, reflection is essential as we ask students to be aware of the processes by which they think and learn.

Methods and Strategies

The most effective learning occurs when students directly experience their subject matter. Therefore, the science curriculum is grounded in laboratory activities where students hypothesize, predict, measure, assess and evaluate scientific phenomena. For example, students will learn laboratory safety protocols, compare microorganisms with USB-linked microscopes, and identify the patterns of chemical reactions with electronic probes.

Independent Research Project

In 9th and 10th grade, students will perform an independent scientific research project. This in-depth investigation involves developing an original testable question, designing and performing an experiment, gathering and analyzing data, drawing conclusions, and presenting the results. This is an invaluable experience as students learn how to perform inquiry-based science and think critically.

Application of Science Content

An example of inquiry and project-based learning in science at SLA includes students' inquiry into acids and bases, ecology, pollution, and chemical reactions are anchored into an environmental impact study project. Students gather soil and water samples from a nearby proposed construction site, analyze these samples in the lab, evaluate the class' data, and synthesize this information into an argument for or against the proposed construction.

Science Content

The enduring understandings are used to guide students' inquiry with attention to local, state and national content standards. Our curriculum is flexible in that we "spiral" through science content as it meets student inquiry. We also ensure students have a broad and deep understanding of how science topics are inter-related—within science and across school-wide subjects.

Science Curriculum, Cont'd

In 9th grade, SLA students complete a year of Physics instruction. During this course, students investigate force, motion, and energy. In 10th and 11th grade, SLA students participate in a two-year integrated biology/chemistry course. Learning biology and chemistry simultaneously allows for meaningful connections to be made between the two disciplines, and enables us to investigate these disciplines through content-rich projects. In their senior year, SLA students take science electives such as Anatomy and Physiology, Biotechnology, and Science in Society. Students will also have access to enrichment coursework including dual enrollment opportunities at local universities and specialized courses offered as part of our partnership with TFI and other organizations.

Below is a sample portion of our 9th grade Physics curriculum:

Experiment Introduction

- Creating Experiments
- Collecting, Interpreting, & Analyzing Data
- Argumentation

Kinematics:

- Describing Motion with Words
- Describing Motion with Diagrams & Graphs
- Describing Motion with Equations

Newton's Laws

- Newton's 1st, 2nd, & 3rd Laws
- Force and Its Representation

Work, Energy, & Power

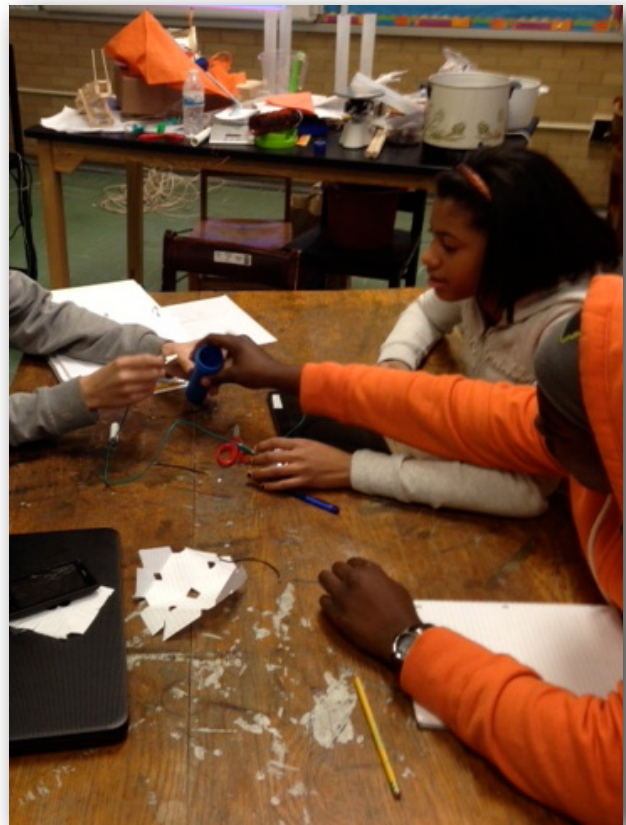
- Basic Terminology & Concepts
- The Work-Energy Relationship

Current Electricity

- Electric Potential Difference
- Electric Current
- Electrical Resistance
- Circuit Connections

Enduring Understandings

- Scientists use models to describe patterns and predict behavior.
- Scientific ideas may change in the face of new information.
- Time is what enables us to recognize change.
- The motion of an object is described by intervals of change.
- Common sense rules for behavior are not always supported by science.
- Scientific theories become part of societal thinking through a variety of paths.
- Interpreting data requires rigorous control of experimental procedures and variables
- We develop some understanding of the world based on our everyday experiences.
- Play and entertainment can be valuable resources for developing sound mental models.



Mathematics Curriculum

The common view of mathematics, particularly higher-level math, is that it is abstract and a discipline with little bearing on our daily lives. The study of mathematics at SLA aims not only to transcend this view but also to reveal the potential of mathematics to solve problems, explain various phenomena, and inform decision making. We see mathematics, and the logical process involved in it, as a powerful tool for thinking about and understanding our lives.

Students of SLA will thus follow an integrated mathematics curriculum, which involves a holistic approach for studying mathematics. While the courses offered follow the traditional high school sequence that begins with Algebra 1 or Geometry and ends with Pre-Calculus, Calculus, or Statistics, our approach towards the sub-areas of math is in line with SLA's inquiry-based and interdisciplinary pedagogy.

The goal of the curriculum is not only to prepare students for higher-level mathematics but also to expand and strengthen their ability to think logically, flexibly, and critically using mathematics as a tool. The curriculum will challenge students to:

- Explore the relevance and utility of math in diverse settings and through varied learning processes.
- Explore the connections between mathematical knowledge and their study of other disciplines in various contexts.
- Incorporate the use of technology in both the learning process and the application of mathematical concepts.
- Practice their ability to reason and express themselves mathematically.

First-Year Mathematics: Integrated Algebra 1 or Geometry

Most first-year students will engage in the study of beginning and intermediate algebra, which includes explorations of abstract reasoning, patterns, linear and non-linear equations and inequalities, power models and statistics. Depending on their prior mathematics background, some incoming students may be placed in Geometry, in which students will learn about inductive and deductive reasoning, two- and three-dimensional figures, angle and line relationships, and beginning trigonometry. Throughout the year, these explorations will be guided by overarching questions that tie into SLA's essential questions on the understanding of self and phenomena around them:

- How does math help explain what we see or encounter?
- How does math help us solve problems and make decisions?
- How would our realities change WITHOUT certain (mathematical) knowledge?

In the subsequent courses, students will continue to deal with these questions, but with broader and more complex applications.

Courses Offered at SLA:

Algebra 1, Geometry, Algebra 2, Pre-Calculus, Statistics and Calculus.

The diagnostic placement test given at New Family Night assesses their current math skill and knowledge levels. Students who begin with Algebra 1 but demonstrate advanced skill sets in math by the end of their freshman year have the opportunity to accelerate their progression by completing summer course work.

English Curriculum

SLA's 9th Grade English Curriculum

In 9th grade, students will read a diverse list of texts centered on a similar theme – Identity. They will be taught to be active readers, so that they can not only comprehend difficult texts, but also absorb them enough to develop informed opinions. Key reading, note-taking, and vocabulary strategies will enable them to tackle even more difficult texts in subsequent years.

Students will write often, with focused individualized coaching. With appropriate modeling, they will learn how to develop an original thesis and how to support it with well selected evidence from the text. Creative writing also plays a large role. Students create poetry, short stories and memoirs in both fiction and non-fiction. While students have these experiences as writers, we make the essential connection of writing and reading. Learning to read by thinking critically is another way students enhance their own writing. Reading critically includes their ability to make critical inferences, connections, analyses of characters, and questions about what they read within the context of a robust reading process. In addition, students are encouraged to broaden their concept of reading and writing to include art, technology, and other creative media that can be created and interpreted in meaningful ways and are omnipresent in our modern world.

Communication skills are the final priority. In fascinating discussions and collaborative work, students will be encouraged to listen to each other and push their classmates' thinking. Student ideas are respected, challenged, and refined by their classmates' careful attention.

Products and Outcomes

Assignments and projects include online blogging, the five-paragraph analytical essay, memoir vignettes, podcasting, Shakespeare dramatic adaptations, poetry writing and performance, public speaking/debate, and creative projects accompanied by written self-reflection. Independent reading will also be required.

Moving Forward

The 9th Grade English curriculum focuses on the notion of identity and the self; students successfully finish the year prepared to tackle the 10th grade essential questions dealing with the individual in the larger context of the group. Eleventh grade essential questions pertain to change as it relates to individuals and societies. The senior year theme is creation and essential questions are course-specific.

9th Grade: Identity and the Self

Through the study of 9th Grade English, students will:

- Explore notions of identity as it pertains to their own coming-of-age processes.
- Examine the forces that influence and mold their identities.
- Develop their own sense of who they are in the context of their world and the world around them.

Spanish Curriculum

Students benefit from learning a second language as it expands the populations with whom they can communicate, broadens their perspective of home and world to help them empathize with others, and enhances their communication skills in all languages. Students have opportunities through class trips, after-school activities and through communication with students in Spanish-speaking countries to utilize what they have learned in class in “el mundo verdadero.” We also provide the opportunity for students who are fluent speakers of Spanish to elaborate their language skills and their understanding of the diverse Spanish-speaking world. As the state requires, students will complete at least two levels of World Language by graduation; however, we encourage students to continue in the higher levels of Spanish in order to build language proficiency, deepen cultural understanding and to meet university admission requirements for baccalaureate programs.

Immersion

Because students learn for communication rather than translation, every Spanish class at every level provides an immersion setting in which students and teachers communicate mostly in Spanish. Students are always encouraged to take risks in the language, even when they are unsure. Central to an immersion setting is the abundance of authentic speaking, listening, writing and reading situations. Thus, reading resources include authentic material. Listening activities include interpreting music, radio and web interviews, films, guests and each other. In the spirit of SLA’s core values, assessments will take the form of individual and collaborative projects, presentation of creative compositions, and other real-world (or simulations of authentic) communication tasks.

The Role of Culture

The Spanish language takes on many forms, as do the cultures of the people who speak it. For this reason, culture and language are interlaced in the curriculum, rather than kept as separate topics of study. Students delve into culture beyond holidays and gastronomy, to understand how people interact with each other throughout the Spanish-speaking world. Furthermore, in order to understand another culture, it is necessary to know our own, which is why students in all levels examine their own language and culture along with those of the regions investigated.

Spring Break Trip

Starting in 2016, students will have the opportunity to participate in a service-learning program focused on environmental sustainability. The location will change yearly. While in the country, we work with local experts to learn about sustainable development initiatives that improve rural communities and protects the environment. We will also be performing 20 hours of community service during the trip.

History and Social Science Curriculum

The Study of History at SLA strives to help students:

- Identify, analyze, and evaluate connections between the present and the past.
- Compare and contrast differing sets of ideas while considering multiple perspectives and biases.
- Evaluate the role of the individual, and the group, in influencing the course of social events.

One of the goals of SLA is to make learning real. To put this into practice, it is clear that students have to go well beyond memorizing people, places, and dates. Therefore, we challenge students to collaborate with classmates, engage with their communities and investigate global contexts.

A person who possesses historical literacy has the capacity to grow into an autonomous thinker who can evaluate governmental, educational, political, cultural, and religious perspectives. No matter what a student's path might be in the future, these skills can make their life a part of creating a better world.

9th Grade Course Description

In 9th grade, students study African-American History. Developing an understanding of this topic is critical – especially for students growing up in a large and diverse city such as Philadelphia. The course content focuses on the experiences of African Americans through a thematic approach which explores essential questions on topics such as race, freedom, and culture. Specifically, students apply an understanding of social institutions to analyze and describe individual identity and the significance of various kinds of relationships with others. Students evaluate artifacts for evidence of liberty and equality, analyze the complexities of social hierarchies, and create digital audio-visual projects. Most importantly, students are encouraged to see the complexity of African American history as a means to better understand themselves, their families, and commonalities shared by all people over time and space.

The History Curriculum Beyond the Ninth Grade

The sequence of History and courses at SLA is slightly different than the majority of schools in the District. African-American History is best done in 9th grade as several themes within the course will be touched upon again in both World History in 10th Grade and U.S. History in 11th Grade. It also allows us to link to several key books students read in English. In their senior year, SLA students choose courses from the social science electives such American Government, Economics, and Topics in Global Studies.

“Learning here is more interactive. Everyone puts in their opinion. Everyone teaches here, not just the teachers. I learn so much just from the kids.”

-Grace Wagenveld,
SLA Graduate

9th Grade Technology Curriculum

The technology foundation course forms the backbone of technology infusion at SLA. The use of the new information and communication tools in a school setting should change the way we look at ourselves as students and teachers. The promise of the Internet is now that all students can be content producers as well as savvy content consumers.

With the technology foundation course as their base, SLA students have the grounding in the new technologies they need to become 21st century students and citizens. The technology foundation course is divided into broad categories. Standards within each category are to be introduced, reinforced, and mastered by students. The technology teacher in unison with all SLA teachers will use these standards and profiles in combination with the three essential questions as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills.

The major areas of study will fall into the following four categories: basic operations and concepts, social, ethical, and human issues, technology productivity tools, and technology research tools. The technology class time is also a workshop to continue work from other courses, this time allows for the students to dig deeper into the tools and have a mentor/teacher to guide them through the various learning curves associated with those tools.



9th Grade Engineering Curriculum

Engineering is the application of mathematics and science to solve problems for the betterment of humankind. Students at SLA have the opportunity for hands-on experience exposing them to many of the engineering fields. This elective course is guided by SLA's 9th grade essential questions as we explore many methods of applying the knowledge we are learning in all of our classes. There is a strong emphasis on synthesizing prior knowledge into a plan of how to solve problems and the hands-on process of building the completed solutions.

Goals

- Help students become comfortable with iterative learning (fail fast, fail often)
- Help students become comfortable with situations where there are multiple correct answers
- Introduce many of the fields within engineering.
- Show the convergence of many disciplines.
- Challenge students to come up with their own logical solutions to problems.

These goals mesh nicely with the essential questions and core values as students reflect on what they know about various fields and how to approach problems. They will use many tools to think about how to solve the various problems they will encounter.

Methods

After a brief introduction to some of the different fields (Biological, Chemical, Civil, Computer Science, Electrical, and Mechanical) students will solve some straightforward problems in each. Then each student will complete projects in a few of the fields. The fields chosen will depend on class interest. Examples range from submitting a Letter to the Editor of Science Magazine based on correcting calculations in an article to creating video games to designing generators to utilizing CAD software for reactors they design.

Students who continue in Engineering electives in years subsequent have the opportunity to work on class projects such as designing and building their own products often including solar cells, wind turbines, bio-fuel reactors, and many other projects. Some of the projects have been novel enough to be patented (pending). Creativity of solutions is strongly encouraged.



9th Grade Art Curriculum

The 9th grade art class is an introduction to the authentic study of visual creativity and skill building. Units are designed to insure most art elements and principals are employed. For 9th grade art, students will learn how to “see like an artist.” They will create four main projects, with mini lessons to teach concepts of art. The culminating projects are a giant one-point perspective drawing and a still life drawing. Students are challenged to use most elements and principles in the creation of their art during the course of the year.

For the Art electives SLA provides a rigorous art experience for two basic types of students. Some students will be taking art because they are serious about pursuing art as a career choice and therefore are hoping to have the kinds of experiences in the classroom that will allow them to assemble a portfolio suitable for a college interview. The other student perhaps enjoys art, or simply needs an arts and humanities credit, and will be taking art as a requirement for foundation. Both students are best served by having a variety of experiences that build on other classroom lessons and continue to challenge them to grow technically and conceptually. All SLA students can use the experiences of arts electives to enhance their ability to create projects that have a powerful understanding of aesthetics in all their classes. Students who complete this course successfully will have a thorough understanding of contour, gesture, shading, and other drawing alternatives. They will have worked from still life, nature, and models. Students should understand basic perspective and the fundamentals of design organization. The two-dimensional design aspect of the course utilizes computers for image creation and alteration. Units will include: drawing, design, painting, printmaking, sketchbook journaling, and web journaling of their art pieces.



10th Grade Drama Curriculum

The drama elective at SLA has two very clear goals. All students will be comfortable existing in front of people and able to both capture and hold the attention of an audience. We build on the first goal by immediately seeking out comfort zones, analyzing why we have them, and then trying our best to expand them. Students learn how to stand, walk, and speak confidently. Then they learn the power of imagination, how it works, and how to use their own minds to put themselves in situations that they've never before considered.

We build on the second goal by discussing the motivations of any character. We then learn how to "make your audience feel it." We develop on-stage chemistry, authentic emotion, good use of voice and body tools, and later, the art of good blocking and script writing. Drama is fun, but it's a constant challenge that seeks, in the end, to make every student more confident.



Health and Physical Education

Health

Health Education at SLA is designed to introduce information and have the students practice the skill of making informed decisions related to making healthy lifestyle choices. We study the impact of lifestyle choices and external influences on wellness in the areas of: nutrition, fitness, substance abuse, sexuality, communicable diseases, prevention of “lifestyle” diseases, and resources to design and maintain individual wellness. Through the content of the course we address the six risk factors identified by the Center for Disease Control (CDC) as greatest risks to a young adult’s health. The identified risk factors are: unintentional injuries and violence, tobacco use, alcohol and other drug use, sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (including HIV infection) unhealthy dietary behaviors and physical inactivity.

Physical Education

Physical Education at SLA dedicates itself to offering appropriate educational experiences, activities, and programs. The experiences are designed to enhance moral, intellectual, emotional, social, and physical growth in the students. The activities and programs are designed to help students acquire self-esteem and self discipline, encourage honesty and fair play, accept responsibilities for one’s actions, develop an awareness and sensitivity to others’ interests and differences, and develop skills for recreational games and physical well-being. We strive for continual encouragement and praise for students who adhere to the established standards of behavior in class and the school environment.

SLA Extra-Curricular Athletics: Boys Basketball, Girls Basketball, Girls Soccer, Boys Soccer, Coed Track, Volleyball, Coed Cross Country, Boys Baseball, Softball, Ultimate Frisbee, and Students Run Philly Style.

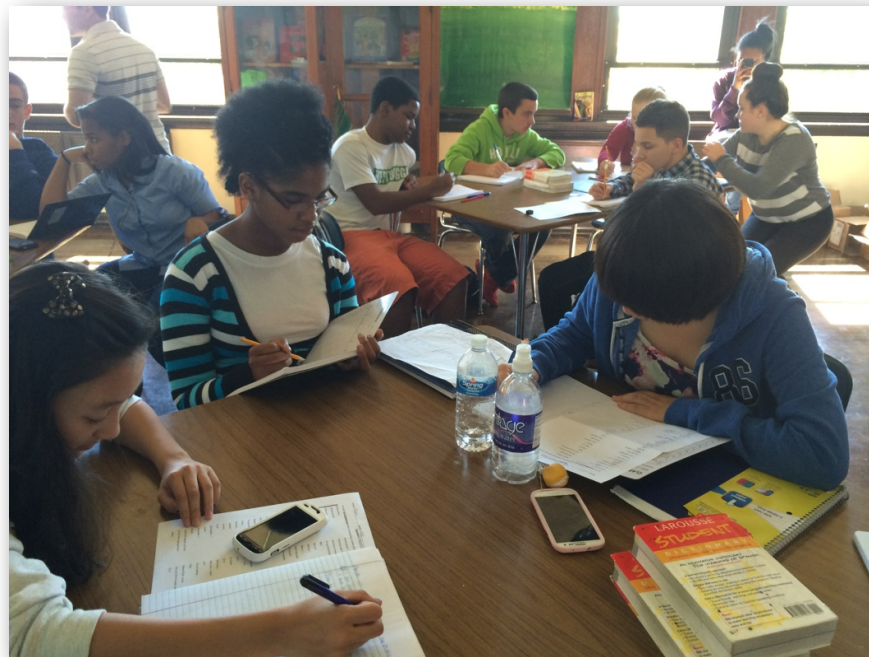


Learning Support at SLA

Building classrooms that are inclusive of all learners is crucial to developing socially-aware and academically-sophisticated students. We know some of the best exchanges occur within heterogeneous learning environments. Because of this we feel that it is important to educate students with special needs, such as Mentally Gifted or Learning Support, in our general education classrooms.

We are committed to providing a student-centered education at SLA. As such, all of our teachers work to differentiate their instruction in order to meet students' diverse learning needs. An ongoing dialogue among teachers regarding their development of teaching best practices is at the core of professional development at SLA.

The Learning Support Team works closely with students with Individualized Education Plans (IEPs) and students with 504 Accommodation Plans. Students meet weekly with the LS teachers to reflect on their classes and gain explicit instruction in executive function strategies to better their participation in the inquiry/project-based learning environment. In addition, the LS Coordinator is available for consultation with any other student or parents to discuss learning needs and help facilitate extra support services at SLA.



Guidance at SLA

Guidance services constitute an integral part of the educational process at SLA. Personalizing each student's educational experience is at the foundation of our mission. The comprehensive guidance program at SLA is designed to help students develop self-awareness, self-responsibility, and informed decision-making skills while taking action to build lifelong competencies for success beyond the classroom. As adolescents navigate secondary schooling, it is important to recognize that they will be faced with decisions that impact their everyday lives and futures. Our goal is that each student experiences success both academically and personally and is prepared to participate as an outstanding member of society.

The counseling department is divided into two entities which work uniquely yet collaboratively. Our **college counselor** focuses on college and career guidance and works with students and families during the college exploration and application process. Our **guidance counselor** focuses on the academic and socio-emotional components of navigating the high school process.

The school counselors are student advocates who assist students, teachers, parents and administrators. The counselors have a wealth of information about resources, programs and services in the community. A majority of the time is spent on providing direct services to the students so that they can access information and resources that will enrich the school experience and support their personal growth. When students have academic or personal difficulties, the counselors coordinate meetings with students, parents, teachers, and advisors to address any barriers to learning and develop individual plans of support. During junior and senior years, the college counselor works closely with students and their families to navigate the post-secondary process.

Major Functions of the Guidance Program

- Academic counseling and planning
- Post-secondary planning/college and career exploration
- Crisis intervention services

Guidance Program Objectives

- To help students become more familiar with post-high school educational opportunities, occupational information and financial aid
- To help students and parents, new to the high school, gain information and become more familiar with the high school educational process
- To assist students in program choices consistent with abilities and career goals
- To assist students in identifying their interests and abilities through an interpretation of their performance on a number of standardized tests (i.e. SAT, ACT, etc.) and self-reporting
- To inform students and parents of guidance-related information
- To help students with the resolution of personal and school-related problems via individual and small group counseling and peer mediation
- To help direct identified students to the appropriate educational and/or mental health support services
- To provide a developmental career guidance program that will enable students to make informed educational and vocational plans
- To review each student's educational progress quarterly with the support of the advisor, family and roster office
- To keep current in all related guidance areas through various professional development opportunities

4-Year Course Sequence

9th Grade	10th Grade	11th Grade	12th Grade
English 9	English 10	English 11	Choice of two semester-long English electives such as Storytelling and Film and Literature
African American History	World History	US History	Choice of two semester-long History electives such as Globalization and US Government.
Physics	Bio-Chemistry I	Bio-Chemistry II	Choice of two semester-long Science courses such as Anatomy and Physiology and Science and Society
Algebra I, Geometry, or Algebra II	Geometry, Algebra II, or Pre-Calculus	Algebra II, Pre-Calculus, or Calculus	Pre-Calculus, Statistics, or Calculus
Spanish I, II, or III	Spanish II, III, or IV	Spanish III, IV, or V	Spanish IV or V
	Health	Physical Education	
Electives: Art, Engineering, and Intro to Technology	Possible Elective Choices: Art, Chess, Computer Science, Debate, Digital Video, Drama, Engineering, Journalism, Yearbook.	Possible Elective Choices: Art, Chess, Computer Science, Debate, Digital Video, Drama, Engineering, Journalism, Yearbook.	Possible Elective Choices: Senior Art, Chess, Computer Science, Debate, Senior Digital Video, Drama, Senior Engineering, Journalism, Student Assistant Teacher Program, Yearbook.
Wednesday Afternoon Mini-Courses	Individualized Learning Plan (ILP)	Individualized learning Plan (ILP)	Senior Capstone Project

Science Leadership Academy Faculty

Principal: **Chris Johnson** - cjohnson [at] slabeeber [dot] org

Counselor: *TBD*

Learning Specialist: *TBD*

History: **Matthew Roy** - mroy [at] slabeeber [dot] org

History: *TBD*

Spanish: **Max Rosen-Long** - mrosen-long [at] slabeeber [dot] org

Spanish: *TBD*

English: **Luke Zeller** - lzeller [at] slabeeber [dot] org

English: *TBD*

Mathematics: **Marina Isakowitz** - misakowitz [at] slabeeber [dot] org

Mathematics: *TBD*

Science: **Leroy Gray** - lgray [at] slabeeber [dot] org

Science: *TBD*

Health/Gym: *TBD*

Technology Coordinator/Art: **Mary Beth Hertz** - mhertz [at] slabeeber [dot] org

Partnership and Program Coordinator: **David Sokoloff** - dsokoloff [at] slabeeber [dot] org

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