

Draft of Technology Implementation Plan

May 2014

This draft of a Technology Plan is predicated on the [SCSD Strategic Plan](#) that asserts that “our students will enter a world of work and social interactions that will be very different from those of their parents. In order to prepare them for the future and yet undefined careers, it is imperative to consider and address a number of emerging trends that provide the context and conditions for their future success.”

A Connected and Borderless World - The technological world and its associated network of social interactions are undergoing enormous changes. They serve as drivers of change that present a suite of challenges, and more importantly, opportunities for rethinking the educational landscape. Children today are born into a world where digital access to information is commonplace. For these post-Millennials, such is not considered “technology,” but rather the normal way of interacting with the world. Our increasingly networked world allows the connection of all human enterprises through information networks and unprecedented creation and sharing of educational and social content. This ubiquity and access present the challenge of how to educate children in a world where the sum of human knowledge is available instantaneously, for free, at their fingertips.

Workplace Requirements for 21st Century Skills - Parallel and intertwined with the changes taking place in the technological landscape is a rethinking of skills and conceptual tools that are critical for 21st Century learners. The [Partnership for 21st Century Skills](#) project calls for a focus on the 5Cs: Critical Thinking & Problem Solving, Communication, Collaboration, Citizenship (from local to global) and Creativity & Innovation. The 5Cs embody mindsets that are critical for our students to successfully participate in the contemporary and evolving workforce. The successful development of these skills happens in school and home environments that adopt a whole child perspective which, in addition to building technology proficiency and adroitness with the information it accesses, engenders the development of each student’s social-emotional, psychological, and physical well-being.

Outlined below are strategies and outcomes to guide us over the next five years, however, three years may

well be more appropriate given the rapid pace of technological innovation. As the draft is reviewed and revised the Design Team will provide costs and more precise timelines for implementation.

1. Student Technology Competencies

Through the varied and rich experiences students encounter in the educational environment, students will develop the skills and knowledge necessary to learn effectively and live productively in an increasing global and digital world. Students will apply and master the practices, tools and skills outlined in the ISTE Technology Standards (<https://www.iste.org/standards/standards-for-students>) to engage in learning and solve real world problems. Technology skills will not be taught in isolation, but acquired through the projects (PBL) and learning experiences they have take part in.

A scope and sequence of essential technology skills will be created through a collaborative design process the integrates feedback from stakeholders and the Strategic Plan, as well as lessons learned from what is necessary to complete projects and products within the curriculum. These standards will be revisited and revised on a regular basis (See a matrix that shows what students should be introduced to, practice, and/or master in each grade level from kindergarten to 6th grade at: <https://docs.google.com/file/d/0B4XYchKeDjk0SWpvcy03a1R2TFk/edit>)

Year 5 Target: All students will demonstrate mastery of technology skills, tool use, and 21st Century habits of mind that also promote responsible Cyber Citizenship.

Year 1 Target: Develop outcome measures and rubrics for technology skills, tool use, and Cyber Citizenship and implement curricula and activities to support the development of technology literacy and to refine outcomes and measures.

Action	When	Who	Measures
Develop Tech-infused learner outcomes (Standards, Scope and Sequence) based on ISTE Student Standards and Matrix of Essential Computer Skills.	Draft Documents available	Design Team	Initial measure is a plan to roll out pilot sequence of units to be implemented in 2014-15. Mastery will be correlated with District Outcome Measures (under development) for grades 3, 5, and 8).
Focus and embed Tech-Infused components in Project Based Learning Units.	Ongoing	PBL 101 Teachers, Tech Team	Teachers will articulate Tech tools and skills integrated in their PBL Units to be shared in the online repository. Students will demonstrate tech competencies in public forums and as part of a longitudinal portfolio.
Identify and develop lessons or links with outside resources for lessons on Cybersafety (Common Sense Media) to become part of a scope and sequence.	Fall 2014	Design Team	Initial measure is a plan to roll out pilot sequence of units to be implemented in 2014-15. Mastery will be correlated with District Outcome Measures (under development) for grades 3, 5, and 8). Develop a student Digital Passport or Drivers License to recognize student mastery .
Implement a web-based Typing program targeted to 3rd & 4th grades to ensure mastery of correct keyboarding skills.	Spring 2014	Design Team	3rd and 4th Grade students will gain experience typing in class and at home in preparation for the SBAC Field Test. In 2014-15 students will meet the recommended Common Core 4th Grade benchmark of ability to type one page in one sitting at a minimum of 11 words per minute.

2. Establish Technology, Practices and Partnerships to Support “Breaking Down Walls of Traditional Classrooms”

A major theme of the Strategic plan is to identify opportunities and logical next steps towards fully leveraging blended learning and enlisting strategic partners to meet the needs of students. Identifying appropriate and genuine opportunities to incorporate blended learning resources in support of project based learning, individualized learning plans, enrichment and varied elective offerings for students, while addressing their varied modes of learning, is paramount to 21st Century learning. Students can extend their classroom learning

experience through portals to blended and flipped learning and engage in global citizenship via video conferencing and other emerging technologies.

Year 5 Target: What we think of as the traditional school learning environment will be expanded and transformed.

Year 1 Target: Establish two well-matched and robust partnerships and incorporate two blended learning services in support of expanding the reach of 21st Century and Problem Based Learning.

Action	When	Who	Measures
Explore industry, university, foundation, and nonprofit Partnerships to support expanding vision of learning environments *Note: special focus on funding opportunities	Ongoing	Design Team, Superintendent	Add a minimum of two new partnerships each year.
Adopt and Pilot Blended Learning programs in and out of classrooms and school sites	Fall 2014	Design Team	Have minimum of 2 Blended services ready to implement at beginning of 2014-15 school year.
Visit real and virtual Learning Environments that feature blended approaches	Ongoing	Design Team	Prepare report to AC on viability and desirability of Blended resources.
Expand distance education opportunities through Zoom videoconferencing and	Ongoing	Design Team	Every grade level at each school site will make at least 1 connection to an external site via teleconferencing or the web.

other web-based services			
Provide Professional Development to Teachers and Staff on Blended and Distance educational environments	2014-15 School year	Design Team and outside presenters	Hold a minimum of 4 Blended/Distance PD sessions during 2014-15 School year.

3. Implement Technology Enabled Curriculum and Assessment Systems

The District will develop and implement a suite of tech enabled programs and systems to monitor and support student learning. This suite will include but not be limited to; portfolio assessments, assessments for learner outcomes, results from statewide measures (Smarter Balanced, CELDT, etc.), integration of current measures (Renaissance Learning and MARS assessments), and a growing suite of formative assessments.

Year 5 Target: Provide a seamless integrated tech enabled suite of assessments that include qualitative and quantitative as well as formative and summative assessments. Provide integration of current data and assessment systems eg. Powerschool, Powerteacher, Data Director, Edmodo. Have in place a well established data system/dashboard that provides community, teachers, and students with real time access to clear and coherent assessment data and information.

Year 1 Target: Adoption, training and implementation of a data information system that incorporates current and future assessments in a single system that is easy to access and understand. Establish a repository for longitudinal student portfolios.

Action	When	Who	Measures
Purchase equipment, conduct training and put systems in place to successfully implement Smarter Balanced assessments	Ongoing	Tech Team	Successful implementation of the Field Test and 2104 -15 SBAC.
Develop, identify, and pilot real time, formative assessments in classrooms to support Common Core standards and Project Based Learning for all learners with an additional focus on supporting students with special needs	Fall 2014	Design Team	Adoption of formative assessments that will be part of long term data tracking and reporting strategy.
Explore partnerships to facilitate development of Assessment Systems	Ongoing	Design Team	Minimum of two funded partnerships well aligned with Strategic Plan.
Develop rubrics for measurement of tech infused learning in PBL units and exit outcomes	Summer 2014	Design Team	Incorporated in Draft Exit Outcomes.
Identify and implement Data and Assessment Management System to replace DataDirector	Summer 2014	Design and Tech Teams and Teacher input	New Data System phased in during the 2014-15 School Year.
Pilot Dashboard Data Presentation tool on District Website	Summer 2014	Design Team	Data Dashboard prominently featured on District Website
Adopt strategy for	Fall 2014	Design Team and	Pilot portfolio system (Part of Google

curating student longitudinal portfolios		Teacher input	Classroom Pilot).
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4. Establish an Infrastructure that ensures access to appropriate technology for all students and staff to support development of 21st Century Learning.

The Strategic Plan calls for the development a project-based, technology-infused approach to teaching and learning, featuring real-world, meaningful design challenges, including a deep appreciation for and exploration of the creative expression found within the arts California's adoption of the Common Core State Standards (CCSS).

Year 5 Target: Every student will have access at school and home to the computing devices that will support their school initiated and individual learning objectives. We envision this to be some combination of tablet-based computing in lieu of today's paper based textbooks and curricular materials and keyboard equipped laptops and desktops that support collaboration, project specific computing needs, and assessment systems. We will have explored and settled on models (One-to-One Computing, Bring Your Own Device, District Sponsored Purchasing Plans, etc.) for insuring that every student has ubiquitous access to the learning device(s) and connectivity to meet the District's learning technology goals. We recognize the likelihood of unanticipated innovative technologies emerging that could profoundly reshape our understanding of how students learn and interact with others during this 5-year window.

Year 1 Target: Students in grades 3 through 8 will have a minimum access ratio of 2 students to 1 mobile computing device and students in grades TK through 2 will have a minimum ration of 4 to 1 tablet devices to support implementation of the Common Core State Standards, Project Based Learning, 21st Century Learning goals, and for student proficiency in touch typing. Continue to provide and update a fully functioning, robust network and infrastructure across all schools, both in school and after school.

Action	When	Who	Measures
Develop inventory of all devices in district	Summer 2014	Tech Team	All devices will be inventoried and managed by SysAid. An annual inventory report will be produced in September 2014.
Develop base line minimum device ratio at each grade level and purchase to meet those levels	Proposed as Year 1 Target	Design Team and AC	Mobile devices will be deployed in classrooms.
Investigate various platforms for textbooks and access to digital and web-based curriculum	Ongoing	Design Team	
Determine devices and infrastructure needed for new construction and new schools	Ongoing	Design Team in conversation with Architects and AC members	Reporting by Architecture Team.
Develop overall plan for replacement and repair of all district computers and tech equipment in offices, libraries, labs, etc.	August 2014	Tech and Design Teams	Report to AC Committee.
Google Docs roll out	Ongoing	Tech and Design Teams	Provide Tier 2 Google Docs training to all staff face to face and develop online video tutorials.
Redefine libraries and media centers	Ongoing	Design Team and Librarians	Investigate exemplary sites and visit virtually and /or in person.
Develop and coordinate overall plan for purchases and deployment of technology for new	Ongoing	Design Teams and Tech team Cabinet Team	Schools will have technology needed when students arrive.

school campuses (printers, document cameras, monitors, projectors, etc.)			
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5. Establish responsive, robust staff professional development programs and technology support networks to guarantee the seamless implementation and realization of tech infused 21st Century Learning

The realization of District tech-related strategic initiatives is contingent upon professional development opportunities for all staff and timely and effective tech support.

Year 5 Target: All staff will become confident users of technological tools and systems to support 21st Century teaching and learning. All teachers will demonstrate proficiency in all facets of the International Society for Technology in Education [ISTE Standards for Teachers](#).

Year 1 Target: Develop a District wide technology professional development plan to support 21st Century teaching and learning. Develop systems to promote the ability to support technology needs in a timely manner.

Action	When	Who	Measures
Develop and implement a Helpdesk IT support system	Fall 2014	Tech Team	Successful transition to online tech support ticketing system by mid-year
Increase onsite support of tech infused learning and ability to respond to	Fall 2014	Design Team	Reconsider Tech Associates model of support at the elementary schools. Revise job descriptions and, budget permitting, reconceptualize

tech needs in a timely fashion			support person time at each school.
Explore and pilot feasibility of online Faculty educational technology and curriculum innovation certification through organizations like Leading Edge Certification	Ongoing	Design Team	Pilot and support a minimum of one faculty member per school.
Develop a District staff Tech PD Plan for 2014-15 school year	Summer 2014 and ongoing	Design Team	Explore mini tech seminars at faculty and staff meetings, online certifications, develop online PD resource site