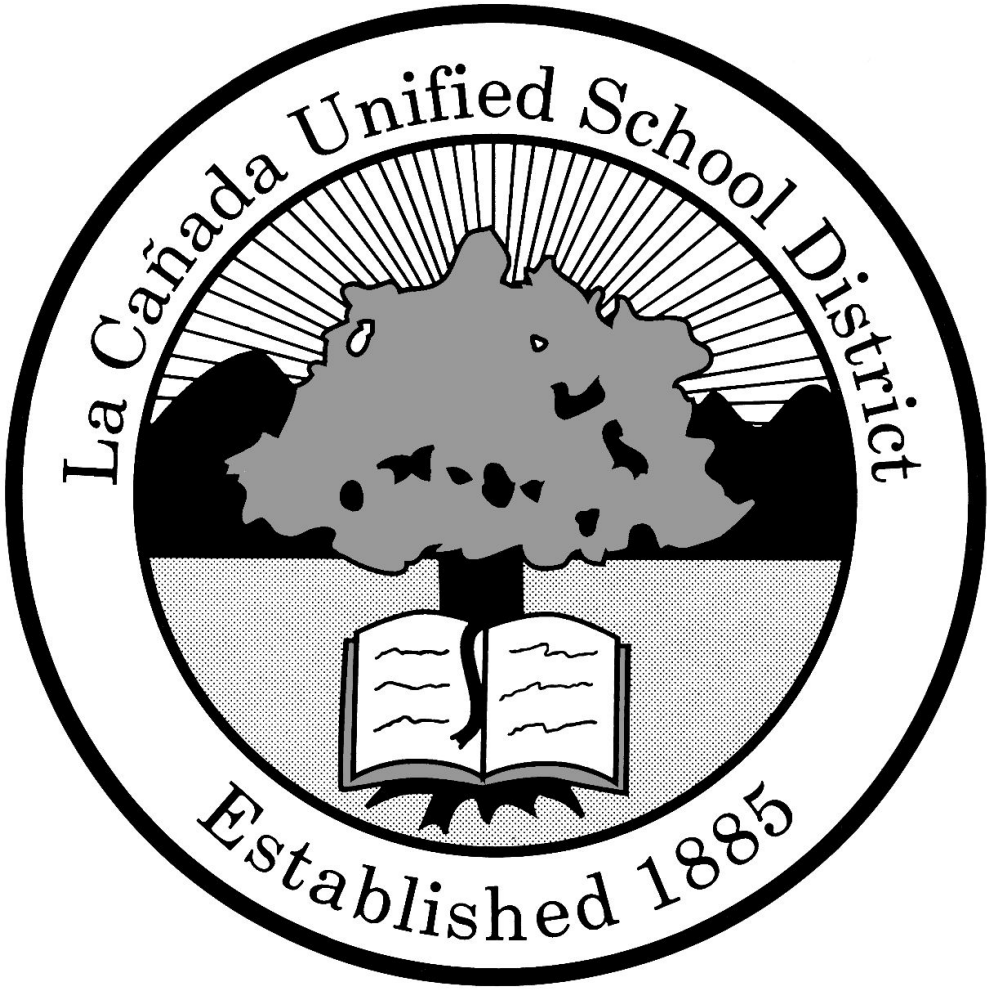

La Cañada Unified School District

Technology Plan 2019-2022

We are a learning community committed to personal growth and academic excellence.

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1. Vision and Introduction

Education does not depend on a bell, a book, or a building. Education instead should be founded on student interest and inquiry, relationships with peers and teachers, and the learning needs of all students. The vision of the La Cañada Unified School District Technology Department looks beyond simply providing students and staff with technology tools, to empowering students by providing and supporting opportunities for active learning, encouraging wide-spread innovation, and delivering top-notch customer service. We, as a department, exist to support the learning cycle and all facets of the instructional experience. We exist to develop forward thinkers and to challenge the status quo. We exist to support all members of this community: students, staff, and families. We exist to build a rock-solid technology environment that is ready for all that we dream up today, and tomorrow.

The role of technology in LCUSD has gone through several updates over the past 10 years from helping teachers manage their day through online attendance, website building, to projecting lecture notes and materials printing. It existed in every classroom, mostly in the hands of the teachers. Six years ago, the vision shifted to move technology to the hands of the student through mobile devices, online resources, and accessible creation tools. Today, we seek to empower students, staff, and families to develop core skills necessary to safely have technology in their lives as well as skills to use technology as a tool. Now that technology is ubiquitous, the technology department emphasis needs one more upgrade. We want to see technology move from the sole driver of change to an accelerant; uplifting, guiding, even fading when appropriate.

During the drafting of this plan, teachers, staff, and parents were asked what behaviors they wanted to see in the classroom. Answers included: respect, empathy, compassion, listening, tolerance, resilience, grit, honesty, curiosity, creativity, dependability, courage, and independence. In the absence of a crystal ball or an LCHS student-developed future predictor app, the known future holds an increased need for skills and values not found in textbook content, but nurtured in classrooms through authentic learning experiences. There is a need for student lessons on data rights and privacy, the impact of social media, and being an active consumer.

We do predict another opportunity in finding throughlines in our work to include social and emotional development. A natural intersection for this team will be the digital citizenship lessons that offer students a chance to learn the whys and hows of choices we make with technology.

The mission of La Cañada Unified School District reads, “We are a learning community committed to personal growth and academic excellence.” The technology department is part of this learning community sharing the same commitments. We seek to deliver opportunities in support of the district mission.

Six pillars have been outlined in this technology plan to enhance the educational goals of LCUSD: Teaching, Learning, Assessment, Infrastructure, Leadership, Community. Each has been explored and expanded upon through tangible goals. And like all good technology, reviews, revision, and reflection will be ongoing during the cycle of this plan.

Our work outlined in this plan is based on resources such as the ISTE Standards for Students and Educators, the National Technology Plan, and Future Ready Schools. Our learning is supported by professional organizations like ISTE, CETPA, COSN, and CUE. Echoes of our attendance at conferences, collaboration with colleagues, and tech department meeting conversations are found throughout this guiding document.

2. Six Pillars of Technology the Plan

The first goal is centered on teaching and what is delivered in the classroom. We hope to use these action items to influence instructional experiences for our students and to support the instructional goals set forth by each site.

Goal One (Teaching): Create a culture of experimentation and curiosity that supports authentic learning experiences that involve trial and error.

1. Digital citizenship lessons curated and led by David in grades K-8, and Lindsay in 7-12.
2. Design thinking lessons that push participants to think creatively
3. Explore the SPACE framework from Challenge Success: “P” for problem-based learning.
4. Assess the Chromebook program and determine areas of need and next steps.
5. Partner with site admin and teacher leaders to align needs for technology experiences.

The second goal connects to the district mission statement and being a learning community. These action items relate to the learning cycle and how technology can support the acquisition of new skills for students, teachers, parents, and staff.

Goal Two (Learning): Empower all users of technology including students, staff, and parents to develop core competencies connected to their specific roles as well as preparing for future endeavors.

1. Explore the SPACE framework from Challenge Success: “C” for a climate of care in developing healthy tech habits and “E” for educating parents, students, and faculty.
2. Integrating the ISTE standards for students and staff.
3. Develop a targeted training program for support staff.
4. Engage in training for technology department team members.
5. Create a teacher innovator camp experience.

The third goal on infrastructure is about the support needed to deliver high-quality teaching and learning experiences along with maintaining the school business systems.

Goal 3 (Infrastructure): Build and maintain a robust and reliable network that supports teaching and learning initiatives as well as student and staff safety systems. Considerations will be made for future growth and expansion.

1. Launching Catapult, a communication system used during safety drills and incidents.
2. Redesigning the high school network architecture to increase reliability.
3. Begin building out the 10GB+ network.
4. Develop a cybersecurity program with response plans and trainings.
5. Support the Measure LCF projects and LCAP safety projects.

The fourth goal connects to a key element of the learning cycle: assessment. We have two systems currently supporting the collection and analysis of student data and will work to expand the definition of assessment.

Goal Four (Assessment): Support the acquisition of skills related to using data and assessment systems along with the development of alternative assessment practices and experiences.

1. Training for teachers on grading and assessment systems.
2. Realign SBAC data review via Illuminate, led by the site administration.
3. Design lessons/assessments that promote faster, meaningful feedback for students.
4. Explore the SPACE framework from Challenge Success: "A" for creating authentic/alternative assessments like portfolios and reviewing the grading practices
5. Move towards student analysis of their own data.

The fifth goal ties to both oversight and expanding access to decision making. It is also about the development of internal structures that will provide transparency in budgeting and long-term planning.

Goal Five (Leadership): Provide inclusive, collaborative leadership opportunities that involve a variety of user groups in the planning, implementation, and delivery of technology goals.

1. Collaborate with the HR department to support hiring, staff onboarding, technical training.
2. Expand the tech oversight process to include more input from students, teachers, and staff.
3. Launch the monthly systems focus process that has all tech systems scheduled for deep review and maintenance.
4. Publish the comprehensive refresh plan and align with the technology budget.
5. Develop a change management process for new initiatives and protocols for reviewing existing ones.

The final goal, goal six, seeks to push beyond the borders of LCUSD to leverage opportunities not traditionally explored.

Goal Six (Community): Create and maintain community partnerships to strengthen the learning experiences for students, staff, and parents.

1. Use the Challenge Success SPACE Framework "E": Education for the Whole Community
2. Connect with local, state, and national tech leaders/organizations as a support group and resource.
3. Develop a comprehensive communication plan for engagement and safety/security.
4. Develop Foothill Collective (local school tech leaders collaborating)
5. Encourage staff presentations at conferences to build community experiences and reflect on practice.

3. Technology Plan Committee Members

Name	Site	Role	Email
Amy Marcoullier	Palm Crest	Assistant Principal	amarcoullier@lcusd.net
Anais Wenn	District Office	Associate Superintendent	awenn@lcusd.net
Anya Lloyd	Paradise Canyon	Teacher, 4th Grade	alloyd@lcusd.net
Beth Mumper	District Office	Secretary	bmumper@lcusd.net
Brian McDermott	La Cañada High, 9-12	Teacher, Math	bmcdermott@lcusd.net
Camilla Hartman	Palm Crest	Teacher, 1st Grade	chartman@lcusd.net
Cristina Diaz	La Cañada Elementary	Teacher, 3rd Grade	cdiaz@lcusd.net
Daisy Kim	La Cañada High, 9-12	Teacher, English	dkim@lcusd.net
Dan Jeffries	Governing Board	Governing Board	djeffries@lcusd.net
Danielle Murr-Pinsker	La Cañada High, 7/8	Teacher, English	dmurr-pinsker@lcusd.net
David Paszkiewicz	District Office	Lead Instructional Specialist, TK-8	dpaszkiewicz@lcusd.net
Emily Blaney	La Cañada Elementary	Principal	eblaney@lcusd.net
Jarrett Gold	La Cañada High, 7/8	Principal	jgold@lcusd.net
Jamie Lewsadder	District Office	Chief Technology Officer	jlewsadder@lcusd.net
Jenny Franz	La Cañada Elementary	Teacher, 5th Grade	jfranz@lcusd.net
Joe Radabaugh	Governing Board	Clerk	jradabaugh@lcusd.net
Julie Perdisatt	Paradise Canyon	Teacher, 2nd Grade	jperdisatt@lcusd.net
Kevin Mo	La Cañada High, 9-12	Student, 12th Grade	kmo19@mylcusd.net
Kristine Babish	Paradise Canyon	Computer Lab Specialist	kbabish@lcusd.net
Lara Berdahl	Palm Crest	Teacher, 3rd Grade	lberdahl@lcusd.net
Lindsay Staley	La Cañada High	Tech Integrationist, 7-12	lstaley@lcusd.net
Mark Evans	District Office	Associate Superintendent	mevans@lcusd.net
Mark Ewoldsen	La Cañada High, 9-12	Teacher, Science	mewoldsen@lcusd.net
Michael Kassarjian	La Cañada High, 9-12	Teacher, Math	mkassarjian@lcusd.net
Ryan Hainey	La Cañada High, 9-12	Teacher, Science	rhainey@lcusd.net

Stephanie Boayes	La Cañada Elementary	Teacher, 1st Grade	sboayes@lcusd.net
Suzanne Cronon	La Cañada High, 9-12	Teacher, SPED/English	scronon@lcusd.net
Vicki Brown	La Cañada Elementary	Computer Lab Specialist	vbrown@lcusd.net
Wendy Sinnette	District Office	Superintendent	wsinnette@lcusd.net

4. Writing Process Overview

In the Spring of 2018, the technology plan writing committee was formed. The previous plan expired in 2017 and the LCAP has been the guiding document as it featured explicit technology goals and initiatives. The voters of La Cañada approved a $149 million bond called Measure LCF in Fall of 2017 and a more detailed and robust technology plan was needed. The technology department approached the task of drafting a new technology plan as a way to have the conversation about learning goals to then set the standards for technology in the classroom, proposing that the new plan would aid in the designs for modernization and construction.

The writing process centered on the design thinking model with the first month spent on the empathize phase and thinking about learning experiences first, and technology solutions second. Input came in from all stakeholders on three key questions designed to elicit thinking about learning values and ideals: What is the purpose of our learning spaces? What actions do we want to see in our learning spaces? What behaviors do we want to promote in the learning spaces? Over twenty groups participated in answering these questions on sticky notes, chart paper, and copy paper. The results were tabulated on a spreadsheet and three word clouds were created to synthesize the responses. (View results here)

The plan for the second month was meeting with focus groups to define the challenges and needs based on the data from the three questions, the third month would be the ideation and drafting phase, and the fourth month would be prototyping/final draft. This would conclude with testing the draft at the board meeting and seeking approval.

Various members of the writing team met four times. During the second meeting, the team created a list of how might we questions that revealed some core values and wishes for our district:

- How might we use tech to catalyze collaboration?
- How might we create time and space to learn from each other?
- How might we empower our teachers how might we empower our learners?
- How may we help learners whose modalities don't match with Tech?
- How might we rid ourselves of teacher competition/comparison/fear of? How might we build a culture of trust?
- How might we create a vertical line of skills related to Tech?
- How might we break down our silos?
- How might we help teachers transfer their skills into modern environments? How might we convince the non-techie teachers to come along?
- How might we teach our kids to keep a more positive online presence?

Three brainstorming documents were produced that became catalysts to this final plan. Of the 30 members who asked to participate, the meetings averaged about 10 members at a time, with some participating asynchronously on brainstorming projects. References to guide the writing team included the Future Ready Dashboard and Self-Assessment documents, the National Educational Technology Plan, and the Partnership for 21st Century Learning Framework.

All staff members were invited to join the Trello Board to track progress and memorialize the process.

1. Brainstorming document #1: Five domains
2. Brainstorming document #2: Achievable, Stretch, Moonshot
3. Brainstorming document #3: Pedagogy, Space, Tech

It is important to note the context of the timeline included the enthusiasm of the bond passing and then the tragic shooting in Parkland, Florida. A shift occurred mid-process from that of focusing on innovation and possibility, to focusing on safety and security. This pivotal moment required immediate attention to address the needs and fears felt among students, staff, and parents. The writing team continued to meet, but the overall process of dreaming about technology and redesigned classrooms seemed incongruous with the school climate. The Governing Board created safety and security task force to begin addressing the needs and resources diverted to that process. This also changed the conversation from reimagining the future classroom and the technology needed to support those ideas to technology supporting safety and security. After a short break in the writing process, a small team reconvened virtually to draft the plan and the larger team weighed in with feedback.

5. Present Day

La Cañada Unified School District supports the foothill neighborhood of La Cañada Flintridge and is situated in Northern Los Angeles most notably near the Jet Propulsion Laboratory and the Pasadena Rose Bowl. The District consists of four school sites: Palm Crest Elementary, La Cañada Elementary, Paradise Canyon Elementary, and La Cañada High School with an annual average enrollment of 4100 students and around 450 staff members. Palm Crest has 667 students and 84 staff members. La Cañada Elementary has 651 students and 68 staff members. Paradise Canyon Elementary has 748 students and 83 staff members. La Cañada High School has 2101 students and 252 staff members. This is a 7-12 campus featuring two distinct administrations, yet able to take advantage of a joint master schedule and other shared resources. There is also a district office and maintenance site with approximately 35 staff members.

Student demographics:

Enrollment by Ethnicity 2018-19
Asian: 1,256
Black or African American: 29
Filipino: 64
Hispanic or Latino: 483
Decline to identify: 13
Two or More Races: 364
White: 1,912
Total: 4,129
*Ethnicities/Races with less than 10 students were not included due to FERPA Guidelines

English Learners 2018-19: 165
Unduplicated pupil counts 2018-19: 336

CAASPP English Language Arts/Literacy Results: 2018-19
Std Exceeded Level 4: 60.6 %
Std Met Level 3: 28.2 %
Std Nearly Met Level 2: 8.1 %
Std Not Met Level 1: 3.0 %

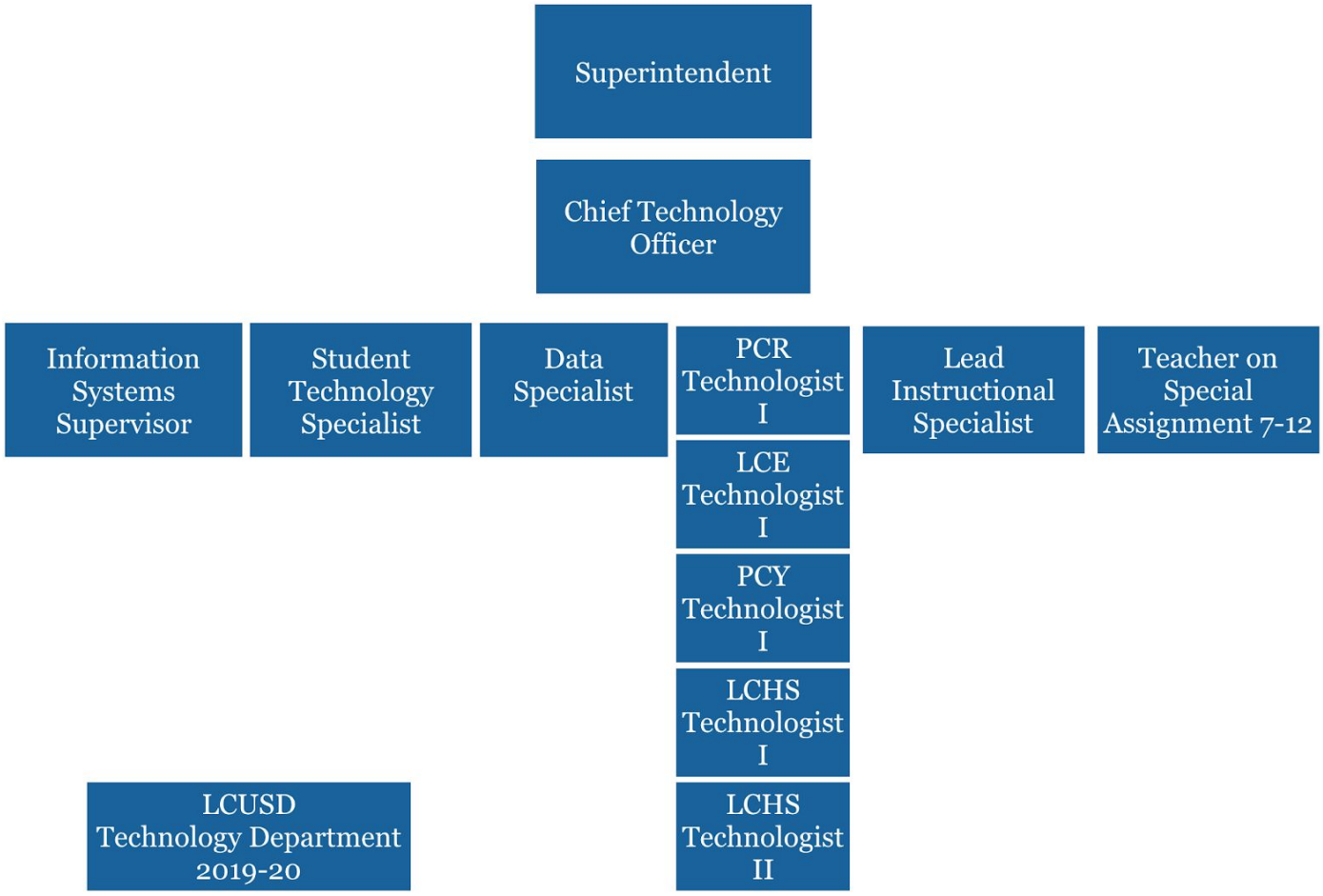
CAASPP Mathematics Results: 2018-19
Std Exceeded Level 4: 64.8 %
Std Met Level 3: 20.3 %
Std Nearly Met Level 2: 10.9 %
Std Not Met Level 1: 4.0 %

Organizational Structure of the Technology Department

The department structure has undergone multiple revisions in the past six years. Prior to our district passing a parcel tax and the recession ending, the department consisted of three members. Starting in the 2013-14 school year, and additional full-time technician and a technology teacher on special assignment (TOSA) joined. After implementing Chromebooks and Google Apps, the structure changed again to include four part-time positions and three TOSAs.

Today, the technology department consists of four part-time technologists, each supporting a school site during the first half of the day. One full-time technologist supports the high school as well as higher-level technical needs on demand for the other sites. Three full-time systems specialists work at the district office. One supports all network and data systems, one covers communication systems including Google Suite for Education and all web properties, and the newest member oversees CALPADS and supports all data needs. The chief technology officer leads the team and represents at cabinet-level for the district.

LCUSD Technology Department Organizational Chart



<u>Current Assignments 2019-20</u>

Jamie Lewsadder, CTO
Jeff Watts, Information System Specialist
Derek Abrego, Data Specialist
Tobias Lewsadder, Student Technologist Specialist & Websites
David Paszkiewicz, Lead Instructional Specialist
Lindsay Staley, Teacher on Special Assignment
Kevin Crain, Technologist II
James Maturan, Technologist I
David Lamb, Technologist I
Omar Torres, Technologist I
Cameron Krischel, Technologist I

Hardware Overview

Staff Devices	
Desktop PCs	235
Windows Laptops	157
Apple Laptops	87
Chromebooks	30
Computer Labs/Classroom Labs	
Desktop PCs	125
Chromeboxes	38
iMacs	56
Chromebooks	35
Classroom Devices	
Desktop PCs	30
Chromebooks	800
iPads	120
Other Managed Chromebooks (Student-Owned/Equity Devices)	
Student-Owned	2,437
Equity Devices	328 (12%)

Network Overview

The past five years have seen a steady increase in the number of devices on the wireless network and a decrease of devices on the wired network. Bandwidth increases happened each year resulting in the current 1Gb capacity. Core switches and fiber lines upgrades are in progress to expand the backbone to 10Gb. Currently, the high school project is complete and the district office is scheduled. At present, average utilization is around 450Mbps-500Mbps daily, with close to 2000 devices in use daily. In order to meet the demands of the rapid growth, two wireless projects took place between 2015 and 2018 to increase the number of access points and upgrade the copper cabling in buildings supporting the Chromebook program. A third project is underway, as described above, to build out the 10Gbps backbone.

A network assessment occurred during the Fall of 2018 and the results helped with prioritization of needs. This includes the expansion to 10Gbps and network segmentation. The need to design a robust network is critical as classroom modernization and new construction will bring more systems online and be network reliant. The first of these projects, connected with the safety and security efforts, is the access control system at La Cañada High School which began in the Spring of 2019. (Network assessment review available upon request).

Help Desk Process and Stats

The Technology Department adopted Zendesk as a ticketing and support system at the start of the 2017-18 school year. Prior to that, Spiceworks was utilized. A concerted effort is made by the tech team to encourage ticket submission while remaining accessible for phone, email, and in-person requests. Tickets are opened for users when needed in order to present accurate workload reports. Also, the knowledge guide is a priority for the team to write new articles in support of a self-serve option for users. Currently, the knowledge guide contains 99 articles. In the first six months of the new ticketing system (Aug 2017-Jan 2018), 2,300 tickets where opened (this included migrating 124 from the older system) and 2,220 of the tickets were solved resulting in an average backlog of 100 tickets. The second half of the year resulted in 1,100 tickets being opened and 1,100 solved. The school year ended with around 50 tickets as an average backlog. In the first four months of the 2018-19 school year, 1,400 tickets were opened and about 1,300 were solved. The backlog has been higher than desired and the need for service level agreements is evident. Another feature that could be implemented is the service feedback function. Currently, this is turned off to reduce the email load on our users. We aim to survey staff twice a year on our customer service to gather data on improvements. Norming exercises are done with tickets as needed to ensure responses and interactions meet our customer service expectations. It is worth noting that Zendesk is accessible by all users now including parents and students and we welcome their help request submissions.

Another important route to gaining assistance for our teachers and staff is through the use of the messaging app, Slack. The technology department utilizes Slack for internal collaboration and support through channels based on systems. Once Chromebooks and state testing entered the district landscape, teachers were added to Slack to build and extend the reach of the technology team members and to foster teachers supporting each other. Currently, all 5th-8th grade teachers have access to Slack all year and teachers involved in SBAC testing have access during the testing windows. Considerations for expanding teacher access have occurred and benefits are being weighed. Computer lab specialists and office staff have channels and engage regularly with the team.

With the annual increase of systems that the department utilizes or manages, a full chart is updated often to reflect duties and assignments. See technology department systems and responsibility overview in the appendix.

Programs

Over the past five years, a dramatic refocusing has occurred in terms of the technology department supporting and championing instructional technology initiatives. One of the most influential being the Chromebook program and the move to Google accounts for staff and students. Other notable changes have been in the elementary computer labs in terms of learning experiences, personalizing the special education technology device and application program, and partnering with the Educational Services department for online textbook procurement and distribution. With the increase in technology usage, a program for the delivery of digital citizenship lessons has been in place for the past five years, with annual review and revisions happening each summer.

Bring Your Own Chromebook

Beginning with a small pilot program, teachers applied to have access to a class set of Chromebooks for a year. Five teachers, one from each school site at various grade levels, were given a Chromebook cart. Also during that year, with support from the La Cañada Flintridge Educational Foundation (LCFEF), Chromebook carts were purchased and distributed to school sites. Based on that initial pilot, the program launched to include all 5th and 7th grades during the 2015-16 school year. The model was bring your own Chromebook and equity devices given to families unable to or choosing not to participate. During the 2016-17 school year, the program expanded to the 5th-8th grades, and has been rolling up each subsequent year.

Computer labs

Over the past three years, computer lab experiences have been shifting. The elementary sites each have one computer lab and have been exploring STEM projects and now the labs feature 3D printer, coding activities, and Lego Robotics. This shift has occurred as more technology moved into the classrooms and traditional computer lab activities became part of the instructional program. There is a desire to continue this trend and add makerspace type projects. One site, Paradise Canyon, has incorporated 20% time where students engage in self-driven problem-solving activities. Palm Crest has led the charge in the 3D printing projects and robotics, and La Cañada Elementary has explored mobile STEM carts that teachers can check out.

At the high school level, the site features an Information Resource Center (IRC) that contains two lab spaces: one with PCs, and one Chromebox lab. The Chromebox and PCs are most often used. The other computer labs are now dedicated to specific courses. LCHS 7/8 has a PC lab for graphic design and yearbook classes. There is also a 9-12 iMac Lab for Photography, Yearbook, and Graphic Design; and a PC lab for computer science. The Project Lead the Way classroom has a cart with high powered PC laptops for the design and engineering applications. The engineering room has undergone renovations and the students are created a dedicated programming room in the office space.

Digital Citizenship and Literacy

In the past, the digital citizenship experience included a review of the student and staff technology use agreements. Now a focused program exists for K-8, and an emerging program is in place from 9-12. An area of growth is extending these same ideas to staff. Currently, the three elementary sites and the 7/8 are Common Sense Media Certified Schools.

The digital citizenship and literacy program specifics are outlined below:

1. TK-6 Program
    a. Based on Common Sense Media's Digital Citizenship Scope and Sequence
    b. Combines videos and cartoons with real-world scenarios, laws, and questions.
    c. Asks teachers to complete 3-6 lessons minimum with their students
        i. Students in lower grades participate in lessons focusing on smart internet searching and staying safe online. For 2018-19, 4th-grade teachers at LCE are piloting a new digital citizenship program that includes more student interaction

2. 7/8 Program
    a. Digital Citizenship component based on Common Sense Media's Scope and Sequence
    b. Each teacher is asked to take on one lesson with all students per year
    c. Digital Literacy component created in collaboration between teachers (needs) and tech team's research.
    d. All 7-8 students receive 6-8 hours of Dig Cit and Lit program/year (2017-18)

3. 9-12 Program
    a. Based on Literacy needs
    b. Created in collaboration between teachers' curriculum research components and tech team's created lessons.
    c. All 9th and 12th graders receive 3+ hours of Digital Lit program/year currently (2017-18)
    d. 9-12 (potential 7-12) Literacy Sequence Curriculum in the works (by TOSA, to be completed and presented May 2020)
    e. The need for 9-12 Digital Citizenship has become apparent and will be included in the new curriculum (social media use and moderation; tech productivity and wellness; and digital collaboration and publishing)

Special Education Software and Hardware

Based on individual educational plans (IEP), students qualifying for special education services may have access to a variety of technology solutions may be implemented to support IEP goals from hardware to software. The IEP team will make recommendations and enlist the technology department in implementation. A noteworthy shift is occurring in software offerings moving from one-time purchases to annual subscriptions and attention needs to be monitored. As more students receive services with annual subscriptions, exploring site licenses should be considered as a way to expand access at discounted pricing. Another area of need is increasing technical training for paraprofessional staff who work directly with students.

Instructional Software and Digital Textbooks

Grade Level/Course	Subject	Product Name	Resource	Online Access
Kindergarten	English Language Arts	National Geographic	Textbook	Yes
1st-5th Grade	English Language Arts	Journey's	Textbook	Yes
6th Grade	English Language Arts	Collections	Textbook	Yes
Kinder-5th Grade	Math	Everyday Math	Textbook	Yes
6th-8th Grade	Math	Math in Focus	Textbook	Yes
LC Math 1, 3, 4	Math	Algebra 1, 2; Precalculus	Textbook	Yes
12th Grade	AP Economics	Economics, AP Edition	Textbook	Yes
Spanish 1, 2	Spanish		Textbook	Yes
French 1,2,3	French	Bien D****	Textbook	Yes

A comprehensive list of educational software currently adopted can be found here.

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Goal Actions, Timelines, and Responsible Parties

Goal One: Teaching	Create a culture of experimentation and curiosity that supports authentic learning experiences that involve trial and error. Develop a comprehensive digital citizenship and literacy program.			
Why	**What**	**How**	**When**	**Who**
Increase awareness and proficiency with existing and new digital resources in order to provide a variety of curricular options	Training on digital instructional resources, conduct an annual evaluation of relevance	-Summer training -Published list/overview of resources -Online training materials	Year One, Ongoing	Technology Integrationists
Meet the expanding needs of teaching staff and student support staff	Partner with site admin and teacher leaders to align needs for instructional technology experiences	-Event/training calendar -Dedicated budget -Involved site leaders and HR -Learning shareouts	Year One, Ongoing	Technology Integrationists
Offer learning experiences that provide opportunities to fail safely and experiment	Challenge Success SPACE Framework: Project and Problem-Based Learning, continue design thinking lessons	-Find first followers -Connect to pocket guide	Year One, Ongoing	Technology Integrationists
The program is five years old and in need of a check-up. Determine the future roadmap	Student device program review	-Survey to parents and students and staff -Inventory assessment -Collaboration with other schools -Explore new models	Year Two	Lead Instructional Specialist, CTO
Students needs lessons on positive and responsible ways to engage digitally	Digital citizenship/literacy program for students	-Create 9-12 citizenship lessons -Review graduation requirements -Finalize 7-12 digital literacy program -Collaboration with other districts	Begins Year One, Ongoing	Technology Integrationists, Computer Lab Specialists, Teachers

Goal Two: Learning	Empower all users of technology including students, staff, and parents to develop core competencies connected to their specific roles as well as preparing for future endeavors. Also, provide support for a tech-healthy habit development.			
Why	**What**	**How**	**When**	**Who**
Our paras make up a large percent of our adult population and they are with dozens of students inside the classrooms every day; they need a systematic tech support system.	Targeted classified staff training on both skills for today and skill for tomorrow	-Survey on needs and best times -Explore various delivery models -Scheduled tech lessons (created and announced 1/semester). 1/wk?	Year One, Ongoing	Tech team
To continually build our own knowledge base and to continually inspire our own questioning for how we can do things better and what needs our students and teachers have.	Technology department training	-Access to ITProTV -Annual conferences -Monthly trainings on current systems -System reviews	Year One, Ongoing	CTO
Digital citizenship and literacy is not just a student need. Understanding the choices we make and fostering healthy tech habits are important aspects.	Explore the SPACE framework from Challenge Success: “C” for a climate of care in developing healthy tech habits and “E” for educating parents, students, and faculty.	-Parent Tech Nights -Screencasts/videos sent out to staff as part of Tech Updates -In class lessons	Year One, Ongoing	Technology Integrationists, CTO, Student Interns
Some educators are ready for more than Google Camp. We need a new camp model that goes beyond the basics of the tech tools	Create a teacher innovator camp experience	-Rebrand Open House to also include spotlights on teacher collaborations and student IPs	Year Two	Technology Integrationists, CTO, site admin
Provide a roadmap for students based on grade level in order to guide teachers on expected skills development	Accessible ISTE Standards for Students, Staff, and Admins	-Creation of a pocket guide to lessons, activities, and experiences based on the standards	Year One, Ongoing	Technology Integrationists

Goal Three: Infrastructure	Build and maintain a robust and reliable network that supports teaching and learning initiatives as well as student and staff safety systems. Considerations will be made for future growth and expansion.			
Why	**What**	**How**	**When**	**Who**
The risk of school data breaches is growing. We need a response plan that includes communication and recovery protocols.	Data recovery plan	-Create a data backup system -Test the system	Year One	Consultant, Tech Team
Many of the Measure LCF projects include aspects of technology. Some of the LCAP safety goals can be supported by technology.	Support the Measure LCF projects and LCAP safety projects	-Attend program manager meetings -Launch and monitor safety systems like Catapult -Develop cabling standard -Implement LCAP safety priorities	Year One, Ongoing	CTO, Tech team, Director of Programs and Services
Our network is near capacity at 1Gb. This is the next step to be ready for the Measure LCF projects and educational needs.	Begin building out the 10GB+ network,	-Inventory all network equipment -Create RFP/Bid document -Includes fiber lines, hardware, and copper lines.	Year One, Ongoing	Consultant, Tech Team
With the increase of network usage and devices, the current architecture is inadequate and needs redesign.	Redesign the high school network architecture to increase reliability.	-Study existing network design and load -Plan new design -Work with consultant to rebuild network	Year Two	Consultant, Tech Team
Everyone has a role to play cybersecurity. This needs to be part of our daily work in terms of personal vigilance ongoing awareness.	Develop a cybersecurity program with response plans and trainings	-Attend trainings -Find/developments materials to train staff -Conduct audits	Year Two	CTO

Goal Four: Assessment	Support the acquisition of skills related to using data and assessment systems along with the development of alternative assessment practices and experiences.			
Why	**What**	**How**	**When**	**Who**
The tools can be about more than a final mark. The assessment process must be a core element of the learning cycle.	Training for teachers on grading and assessment systems	-What systems are out there -Data and reports in Illuminate -Formative assessments -Discussion of grading practices	Year Two	Technology Integrationists, Teachers, Site teams
Using incoming student data to guide the instructional goals can help personalize the learning for students.	Realign SBAC data review via Illuminate, led by the site administration	-Create How to guide -Systematic calendering of IABs -Meet w grade level PLCs to teach SBAC review	Year One, Ongoing	Technology Integrationists, Teachers, Site leaders and teams, Director of Programs and Services
This has to potential to change what assessments look like. Imagine invite local mentors/experts to serve on assessment panels to which students present their work.	Challenge Success SPACE Framework “A”: tech-infused alternative and authentic assessments	-Connect to PBL -Develop a menu/catalog of options -Create a digital showcase space for student work	Year One, Ongoing	Technology Integrationists, Teachers
Students who are trained to use their own data can be more in control of their learning and engaged beyond the final mark.	Move towards student analysis of their own data.	-Determine data systems students could use -Explore feedback/grading protocols that go beyond one score per assessment -Hold student trainings -Find a pilot class	Year Two	Technology Integrationists, Teachers
Providing feedback to students faster makes the learning from the assessment/lesson more meaningful.	Design lessons/assessments that promote faster, meaningful feedback for students.	-Explore a variety of feedback methods -Create and demo lessons/assessments -Develop a training/creation experience for teachers	Year Two	Technology Integrationists

Goal Five: Leadership	Provide inclusive, collaborative leadership opportunities that involve a variety of user groups in the planning, implementation, and delivery of technology goals. This process will include developing comprehensive refresh plans, refining the technology budget, and assessing the department structure. Launch the monthly systems focus process that has all tech systems scheduled for deep review and maintenance.			
Why	**What**	**How**	**When**	**Who**
The refresh plans helps demystify the tech budget and show the purchasing process. It is also a key component to budgeting.	Publish the comprehensive refresh plan and align with the technology budget	-Create five-year budget planner -Redesign the refresh plan	Year One	CTO, tech team
This tools helps gather the data metrics needed for team improvement.	Updated technology survey for staff, students, parents	-Twice a year; used to inform goals	Year One	CTO, Technology Integrationists, Student Interns
We launch a lot of new systems. This process will help us think through all elements and ensure greater levels of success.	Develop a change management process for new initiatives and protocols for reviewing existing one.	-Study ADKAR process -Develop a internal guide/checklist -Complete the project request form	Year Two	CTO, Tech Team
The existing oversight committee has been extremely valuable and could be improved with expanded voices from teachers and students.	Expand the tech oversight process to include more input from students, teachers, and staff.	-Tech Team report cards -Launch student tech council -Redesign TRAC to include more voices	Year One	CTO, Tech Team, LCHS student leaders
The technical demands are increasing for all LCUSD jobs. This is a critical hiring consideration.	Collaborate with the HR department to support hiring, staff onboarding, technical training	-Systematic calendaring of PD trainings across K-12 LCUSD -Develop onboarding checklist	Year One	CTO, HR Director

Goal Six: Community	Create and maintain community partnerships to strengthen the learning experiences for students, staff, and parents.			
Why	**What**	**How**	**When**	**Who**
We need to advertise and practice with the communication routines for both engagement and emergencies.	Develop a comprehensive communication plan for engagement and safety/security.	-Launch Aeries Communication -Train all staff -Test system with all users	Year One	CTO, site leaders, district leaders
Preparing for a conference builds in reflection on practice and attending conferences allow for exposure to new and innovative ideas	Encourage staff presentations at conferences to build community experiences and reflect on practice.	-Advertise conference opportunities -Find teachers to copresent with -Plan project “teacher sabbatical” (ask about this!)	Year One, Ongoing	CTO, Tech Team
Our parent ed program has helped develop positive relationships. We need to continue this and expand to a wider audience	Challenge Success SPACE Framework “E”: Education for the Whole Community	-Build website page dedicated to parent/ community training -Host parent tech nights -Share quick tips	Year Two	CTO, Tech Team
Tech expenses are increasing. There is an opportunity to partner with local schools to leverage our purchasing power	Develop Foothill Collective (local school tech leaders’ collaborative)	-Meet w school leaders about various issues including purchasing,	Year One, Ongoing	CTO, tech team
Watching for trends and learning from others are powerful resources. We will continue to do this work.	Connect with local, state, and national tech leaders/organizations as a support group and resource.	-Membership in tech organizations and conference attendance -Joint partnerships and meetings	Year Two	CTO, Technology Integrationists, Student Interns, Teachers

Goal Planning Section and Brainstorm

The next section features the planning and brainstorming documents that led to the six pillars and initial actions and outcomes featured on page 3 and 4.

Goal one Teaching: Create a culture of experimentation and curiosity that supports authentic learning experiences that involve trial and error. Develop a comprehensive digital citizenship and literacy program.

Quick Wins	Bold Moves	Game Changers
• Training on digital resources* • PD offerings in and out of district • Design thinking lessons • Inquiry-based lessons • Teacher badges* • Digital citizenship week celebrations • Common sense media certifications* • Pilots with new tech • Chromebook program assessment	• Targeted collaboration with other teachers in and out of district • ISTE Scope and Sequence • ISTE Teacher standards • Begin the conversation about a cohesive model to post assignments (by grade, by department) Can an LMS solve this? • Support the P in the Challenge Success SPACE framework (Project and Problem-Based Learning) • Tech play days • Student device program transformation • Getting site leaders involved in tech lessons • Accounts for substitutes • Elementary librarians lead digital literacy instruction	• Reimagine open house • Implementing Eduprotocols • Teacher innovator cohorts • LCUSD developed MOOC • Flipped lessons studio/cart • Makerspaces at all school sites • LCHS graduation requirements updated to include digital citizenship and literacy • Institute 20% project for staff and students • Instructional rounds *Already in progress

Goal Two Learning: Empower all users of technology including students, staff, and parents to develop core competencies connected to their specific roles as well as preparing for future endeavors. Also, provide support for a tech-healthy habit development.

Quick Wins	Bold Moves	Game Changers
● Student intern program* ● Tech-focused Parent Ed* ● Newsletter ● Staff training* ● DO tours sites ● Lunch and learns ● Teacher tech fair ● Book club ● Article club ● Tech corner in the Spartan ● Guest writing for local papers ● Tech team training* ● Summer camps* ● Department/role-centered training experiences for staff ● Promote micro-credentials, badging, and independent learning experiences	● Instructional Rounds ● ISTE Scope and Sequence* ● Annual challenge list for teachers, students, staff, and parents ● Digital citizenship courses for staff and parents ● Teacher and student tech showcase ● Student-created/led tech trainings for students and staff ● Create Intranet for staff resources ● Record trainings ● Teachers presenting at conference ● Student listening sessions	● Design thinking training at Stanford *Already in progress

Goal Three Infrastructure: Build and maintain a robust and reliable network that supports teaching and learning initiatives as well as student and staff safety systems. Considerations will be made for future growth and expansion.

Quick Wins	Bold Moves	Game Changers
• Data privacy safeguards • Data recovery plan • Ticketing system metrics* • Reliable classroom technology equipment* • Scheduled system reviews • Scheduled drills to test security and recovery procedures • Pursue erate-funded projects* • Explore power saving options for computers • Create a back power strategy for key systems • Prioritize recommendations in 2018 network assessment • Use Internet filter to meet CIPA compliance regulations and support student safety goals*	• Build out a 10Gb network • Service level agreements for repairs • Cybersecurity program • VOIP phones in all classrooms	• Collaboration with Measure LCF projects* *Already in progress

Goal Four Assessment: Support the acquisition of skills related to using data and assessment systems along with the development of alternative assessment practices and experiences.

Quick Wins	Bold Moves	Game Changers
• System proficiency (currently Illuminate and Aeries)* • Textbook-based online assessments* • Solicit student feedback on learning experiences • Expand assessment systems (e.g. Kahoot, Forms, Formative, Socrative) • Support SBAC review via Illuminate* • Training on and development of tech-infused alternative assessments • Explore metacognitive tasks before, during, and after learning experiences • Create a tech guide to formative and summative assessment options • Peer review	• Digital portfolios • Support the A in the Challenge Success SPACE framework (Alternative and Authentic Assessment) • Process over product experiences	• Facilitate deeper understanding of grade books • Student-driven data analysis • Grading automation *Already in progress

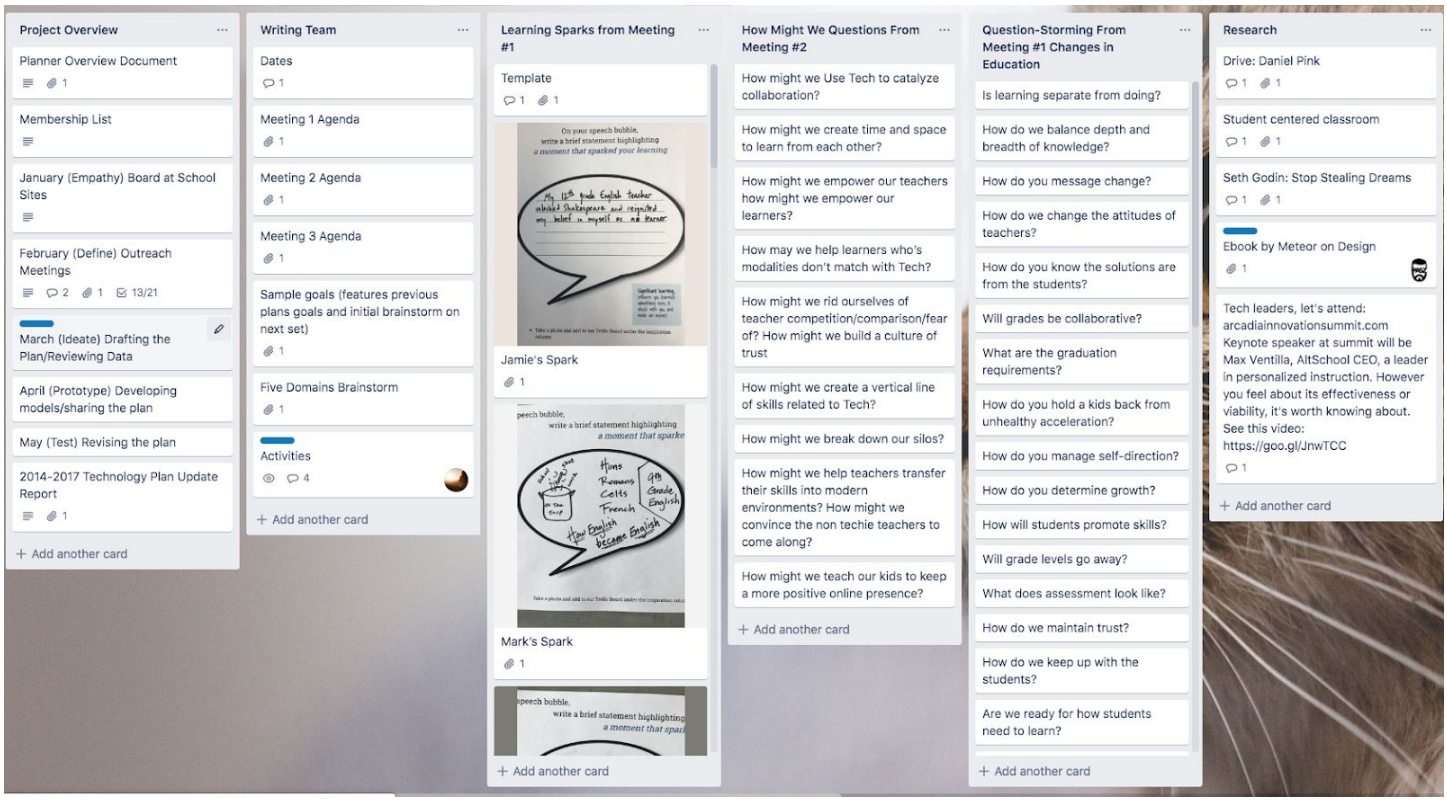
Goal Five Leadership: Provide inclusive, collaborative leadership opportunities that involve a variety of user groups in the planning, implementation, and delivery of technology goals. This process will include developing comprehensive refresh plans, refining the technology budget, and assessing the department structure.

Quick Wins	Bold Moves	Game Changers
• Refresh plan • Weekly site check-ins • Budget review • Updated tech survey • Presenting at conferences* • Board presentations* • Innovation seeking: Conducting regular analysis of systems and implementing improvements • Development and review of board policies and administrative regulations review* • Reimagine the Technology Oversight Committee* (TRAC)	• Tech team report cards • HR partnership • Five-Year budget planner	• Develop a change management process for new initiatives • Develop project management protocols *Already in progress

Goal Six Community: Create and maintain community partnerships to strengthen the learning experiences for students, staff, and parents.

Quick Wins	Bold Moves	Game Changers
● Participation in local, state, and national technology organizational meetings ● Comprehensive two-way tech communication plan for students, staff, and parents ● Tech blog/newsletter ● Support the E in the Challenge Success SPACE framework (Education for the Whole Community) ● Help develop Superintendent's messaging vehicle ● Maintain and update district and site websites*	● Develop Foothill Collective: local school group to discuss technology needs ● Joint district/school trainings for staff	● *Already in progress

Screenshot of the Trello Planning Board: Access via this link – https://trello.com/b/7bz0BTnl/2018-2021-lcusd-tech-plan



LCUSD Technology Department Responsibilities/Systems

Infrastructure
1. Copper/fiber
2. Switches
3. WAN links
4. Servers
5. Refresh plans
6. General repair
7. Wireless access points
8. IDFs/MDFs
9. UPSs
10. Project management

Network
11. Active Directory
12. SCCM
13. Ruckus
14. iBoss
15. Palo Alto Firewall
16. Mitel phone system
17. Rapid Recovery Backups
18. Servers/VMware
19. Ocularis security cameras
20. JAMF for iPads

Data
21. Aeries
22. Illuminate
23. Aeries Communication
24. Naviance
25. SBAC/CAASPP/ Digital Library
26. Report cards
27. Panorama Ed surveys
28. CELDT/testing pre IDs
29. CALPADS

Hardware
30. Doc cam
31. Projector
32. Printers
33. Laptops
34. Desktops
35. Carts
36. Computer labs
37. Classroom computer labs

User Support and Experience
38. Specialty software
39. "Other department systems"
40. Graduation
41. Zendesk
42. Random tech support

Communication
43. Edlio
44. Social media
45. Zendesk
46. Calendar resources
47. Public relations
48. Slack
49. GSuite
50. Bettercloud
51. Aeries Communication
52. Twitter
53. Newsletters
54. Constant Contact (governing board)

Curriculum
55. LCTV
56. Band room studio
57. Redbird
58. IXL
59. AR
60. McGraw Hill
61. HMH
62. Nat Geo
63. App Store
64. Yearbook Classes
65. Common Assessments
66. GSuite
67. Classlink

Ed Tech
68. Cart management
69. Classroom
70. GoGuardian
71. Clever
72. Quizlet
73. Digital citizenship and literacy
74. Computer lab transition
75. Special Ed devices

Professional Development
76. Training on all systems
77. Individualized instruction
78. GAFE Bootcamps
79. Tech PowerUps for Paras, Office
80. Onboarding

Business/HR
81. SEIS
82. SST/504
83. Aesop
84. Destiny/Follett
85. HRS
86. MealsPlus/eFunds
87. LACOE Connection
88. Teachpoint
89. Keenan/Mandated Reporter
90. Erate
91. Citrix/Peoplesoft
92. Online testing

LCUSD Systems Matrix

System/Software	Description	Department	Site(s)	User	Grades	Subject	Est. User Count	Classlink	Tech Plan Pillar	ISTE Standard	LCAP Goal (CA Budget Requirement)	Annual Cost
Aeries	Student information system	Ed Services	All sites	All	TK-12	N/A	10,000	Yes	Infrastructure	Empowered Lear	1. High quality instruction	
Aeries Communication	Emergency and daily communication	Tech	All sites	All	TK-12	N/A	7,000	Yes	Leadership	N/A	1. High quality instruction	
AR/STAR	Reading program	Ed Services	Elementary	Students/Staff	1-6	ELA	2,000	Yes	Learning	Needs alignment	1. High quality instruction	
Asset Panda	Inventory system	Tech	DO	Staff	N/A	N/A	10	Possible	Infrastructure	N/A	1. High quality instruction	
Bettercloud	Google account management	Tech	DO	Staff	TK-12	N/A	4,600	No	Infrastructure	N/A	1. High quality instruction	
CAMSA	Annual contract to access Microsoft software	Tech	All sites	Students/Staff	TK-12	N/A	3,500	N/A	Infrastructure	N/A	1. High quality instruction	
Classlink	Singal sign-on service for student, staff, and parent accounts	Ed Services	All sites	All	K-12	N/A	4,600	N/A	Learning	Empowered Lear	1. High quality instruction	
Destiny/Follett	Library services system	Ed Services	All sites	Staff	TK-12	ELA	4,100		Learning	N/A	1. High quality instruction	
Dreambox	Math program	Ed Services	Elementary	Students/Staff	1-6	Math	750	Yes	Learning		1. High quality instruction	
Edlio	Website provider	Tech	All sites	All	N/A	N/A	10,000	N/A	Community	N/A	1. High quality instruction	
Frontline	Staff absense and substitute system	HR	DO	Staff	N/A	N/A	500	Yes	Infrastructure	N/A	1. High quality instruction	
GoGuardian	Student activity monitoring	Ed Services	All sites	Staff	3-12	N/A	100	Yes	Teaching	Digital Citizen	1. High quality instruction	
GSuite	Google services for students and staff (email & productivity)	Tech	All sites	Students/Staff	TK-12	N/A	4,600	Yes	Learning	Global Collabora	1. High quality instruction	
HRS	Payroll system	Business	DO	Staff	N/A	N/A	10	N/A	Infrastructure	N/A	N/A	
iboss	Internet filter	Tech	All sites	Students/Staff	TK-12	N/A	4,600	N/A	Infrastructure	Digital Citizen	1. High quality instruction	
Illuminate	Data and assessment system	Ed Services	All sites	Students/Staff	TK-12	All	2,000	Yes	Assessment	Knowledge Cons	1. High quality instruction	
IXL	Math program	Ed Services	Elementary	Students/Staff	K-6	Math	3000	Yes	Learning	Needs alignment	1. High quality instruction	
Jamf	Apple device management	Tech	DO	Staff	N/A	N/A	5	N/A	Infrastructure	N/A	1. High quality instruction	
Maintenance Tickets	Work orders	Maintenance	DO	Staff	N/A	N/A	20	Possible	Infrastructure	N/A	4. Facilities	
McGraw Hill	Textbooks	Ed Services	All sites	Students/Staff	K-12	ELA,Math	2,000	Yes	Learning	Knowledge Cons	1. High quality instruction	
Mealsplus	Food services accounting	Food Services	All sites	All	TK-12	N/A	??	N/A	Infrastructure	N/A	3. Student/staff wellness	
Mitel	Phone software	Tech	All sites	Staff	N/A	N/A	350	N/A	Infrastructure	N/A	4. Facilities	
Nat Geo	Textbooks	Ed Services	Elementary	Students/Staff	K	ELA	250	Yes	Learning	Knowledge Cons	1. High quality instruction	
OnSSI	Camera software	Tech	All sites	Staff	N/A	N/A	7	N/A	Infrastructure	N/A	4. Facilities	
Palo Alto	Firewall software	Tech	All sites	Students/Staff	TK-12	N/A	4,600	N/A	Infrastructure	N/A	1. High quality instruction	
Panorama Ed	Annual 360 survey	N/A	All sites	All	4-12	N/A	5000	N/A	Leadership	N/A	2. Student engagement	
Pearson	Textbooks	Ed Services	LCHS 7/8	Students/Staff	7/8	Science	350	Yes	Learning	Knowledge Cons	1. High quality instruction	

System/Software	Description	Department	Site(s)	User	Grades	Subject	Est. User Count	Classlink	Tech Plan Pillar	ISTE Standard	LCAP Goal (CA Budget Requirement)	Annual Cost
People Soft	Financial system	Business	DO	Staff	N/A	N/A	5	N/A	Infrastructure	N/A	N/A	
Rapid Recovery	Data backups	Tech	DO	Staff	N/A	N/A	2	N/A	Infrastructure	N/A	4. Facilities	
Redbird	Math program	Ed Services	Elementary	Students/Staff	Upper	Math	??	Possible	Learning	Knowledge Cons	1. High quality instruction	
Ruckus	Wireless controller and software	Tech	All sites	Students/Staff	TK-12	N/A	4,600	N/A	Infrastructure	N/A	1. High quality instruction	
SEIS	IEP management	Ed Services	All sites	Staff	TK-12	N/A	30	Possible	Learning	N/A	1. High quality instruction	
Slack	Team and teacher communication	Tech	All sites	Students/Staff	7-12	N/A	40	Possible	Learning	N/A	1. High quality instruction	
Teachpoint	Teacher evaluations	HR	All sites	Staff	N/A	N/A	230	Yes	Assessment	N/A	1. High quality instruction	
Yellow Folder	Digital student records	Ed Services	All sites	Staff	TK-12	N/A	20	Yes	Infrastructure	N/A	N/A	
Zendesk	Ticketing system	Tech	All sites	All	7-12	N/A	500+	Yes	Infrastructure	N/A	N/A	
Listenwise	Listening lessons	Ed Services	PCR,PCY	Students/Staff	Upper	ELA	??	Possible	Learning	Knowledge Cons	1. High quality instruction	
Moby Max	Mulit-subject intervention tool	Ed Services	Elementary	Students/Staff		All	??	Possible	Learning	Knowledge Cons	1. High quality instruction	

LCUSD Scope and Sequence of Technology Skills Development

La Cañada Unified School District

Technology Scope and Sequence

Building 21st Century Learners

LCUSD Mission: We are a learning community committed to personal growth and academic excellence.

Legend	
M	Modeled by teacher
I	Introduce concept
R	Reinforce skill
A	Continual application in authentic tasks

Adapted from these excellent sources

Long Beach Unified School District
Fresno County Office of Education
Madison Metropolitan School District
Corestandards.org (CCR)
ISTE Standards for Students (ISTE)
Common Sense Media (CSM)

The purpose of this document

La Cañada Unified School District seeks to develop students who are uniquely prepared for the 21st Century by focusing on the development of communication skills, creative problem solving, and civic engagement. Central to the development of learners who will be competitive in advanced professional fields is the ability to weave technology into every area of research, analysis, and personal expression.

Our goal is to provide technology hardware, software, and infrastructure that seamlessly supports the rigorous instruction by highly-skilled teachers in the classroom. This Scope and Sequence document will serve as a roadmap for our educators as they plan their lessons. Beyond offering discrete activities focused on the technology, we envision that our students continue to apply their knowledge and skills to authentic, real-world tasks using tools and strategies employed by professionals in the workforce. We encourage all educators to use this document as a starting point, and we welcome your feedback as we bring this plan to life.

Prepared by Jennifer Zine and David Paszkiewicz
Instructional Technology Specialists
La Cañada Unified School District

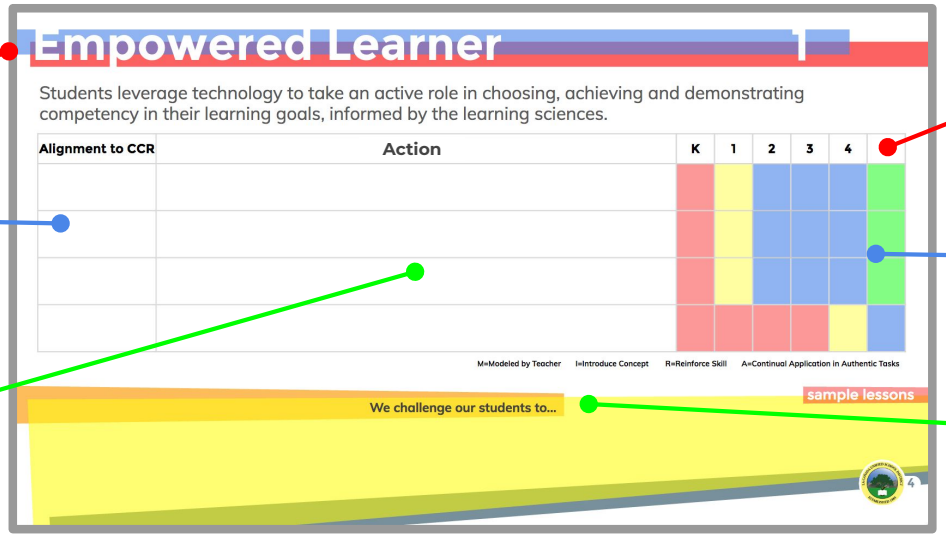
How to use this resource

This document is divided between grades K-5 and 6-12, with skills noted to be introduced, reinforced, and applied at each grade level. Grade 6 is connected to the upper division in order to establish grade 6 skills as preparation for more advanced work at the secondary level. Most text is hyperlinked to supporting resources on this document or from creators of foundational content.

Foundational Skill
One of 7 ISTE Standards. A description of the overarching skills we seek to develop in our students.

Standards Alignment
Click the standard to read a more detailed explanation of the College and Career Readiness Skills, NGSS, or Common Sense Media Lessons.

Action
A description of specific skills and activities students will engage in.



Grade Level
Teachers and parents are encouraged to see these skills as a continuum of development across grade levels.

M, I, R, A
These letters indicate the grade levels at which skills are modeled, introduced, reinforced, and applied in authentic tasks.

Continued Challenge
Over the course of their school careers, students will be continually challenged to develop 21st Century skills, based on the ISTE substandards.

ISTE
The ISTE Standards are the definitive framework for successfully implementing digital strategies to positively impact learning, teaching and leading in our technology-powered world.
--International Society for Technology in Education

CCR
A foundational component of the CA State Standards, the College and Career Readiness Standards (CCR) define what students should understand and be able to do by the end of each grade. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.
--Corestandards.org

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K-5

In the elementary grades, students are given frequent opportunity to learn and practice technology skills and strategies. With a strong focus on digital citizenship and literacy, our students learn not only how and when to use technology, but to use it positively and productively as members of a larger community.

Empowered Learner 1

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.

Alignment to CCR	Action	K	1	2	3	4	5
R1, R9, R7, W7, MP5	Conduct web-based research for projects and identify significant questions for investigation.	M	I	R	R	R	A
W4, W5, W6, SL1	Work in collaborative groups to plan and create projects with peers, using appropriate technology tools.	M	I	R	R	R	A
W7, SL2, SL5	Use a variety of digital tools to effectively demonstrate learning and to create a meaningful product for a broad audience.	M	I	R	R	R	A
(See Design Thinking Model)	Refer to the design thinking model (empathize, define, ideate, prototype, test) to create innovative solutions to real-world problems.	M	M	M	M	I	R

M=Modeled by Teacher I=Introduce Concept R=Reinforce Skill A=Continual Application in Authentic Tasks

sample lessons

We challenge our students to...

articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes

build networks and customize their learning environments in ways that support the learning process

use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways

understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies

Digital Citizen 2

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.

Alignment to CSM	Action	K	1	2	3	4	5
Internet Safety	Navigate and explore the world wide web while staying safe	M	I	R	R	R	A
Online Privacy and Security	Manage your online information and keep it secure	M	I	R	A	A	A
Relationships and Communication	Understand how to build and strengthen positive online communication and communities. Complies with the district's Acceptable Use Policy related to ethical use, cyberbullying, privacy, plagiarism, spam, viruses, hacking, and file sharing.	M	I	R	R	A	A
Cyberfriendship	Explore the roles people play and how individual actions- both negative and positive- can impact friends and the broader communities.	M	I	R	R	R	R
Digital Footprint and Reputation	Learning to self-reflect before you self-reveal; protecting yourself and others while understanding the permanency of a digital footprint	M	M	I	R	R	R
Self Image and Identity	Understanding your online vs. offline identity	M	M	I	R	R	R
Information and Literacy	Identify, find, evaluate, and use online information effectively	M	M	M	I	R	R
Creative Credit and Copyright	Consume, create, cite, and share information responsibly	M	M	M	I	R	R

M=Modeled by Teacher I=Introduce Concept R=Reinforce Skill A=Continual Application in Authentic Tasks

We challenge our students to...

sample lessons

cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world

engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices

demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property

manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online

Knowledge Constructor 3

Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.

Alignment to CCR	Action	K	1	2	3	4	5
R1, R2, R5, R6, R7, R9, SL3, W8	Use age-appropriate technologies to locate, collect, and organize content for specific purposes while correctly citing sources.	**M**	**M**	**M**	**I**	**R**	**R**
R1, R5, R6, R7, R9, SL3	Identify usefulness and credibility of websites by examining their domain names. (.com, org, .gov, .edu, .tv).	**M**	**M**	**M**	**I**	**R**	**A**
W6, W10, L3, L6	Examine and select high-quality information sources appropriate for research tasks.	**M**	**M**	**M**	**I**	**R**	**R**
R5, R7,	Synthesize work over the course of a school year into a digital portfolio.	**M**	**M**	**M**	**M**	**I**	**R**

M=Modeled by Teacher **I=Introduce Concept** **R=Reinforce Skill** **A=Continual Application in Authentic Tasks**

sample lessons

We challenge our students to...

plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits

evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources

curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions

build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions

Innovative Designer 4

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.

Alignment to CCR	Action	K	1	2	3	4	5
W4, W5, W6	Employ the writing process (draft, edit, revise, and publish) as a design challenge in order to create a product that informs, persuades, or entertains in a compelling manner for a broad audience.	I	I	I	R	R	A
W6, W10, SL2	Make use of technology tools (computers, tablets, 3D printers, cameras, robotics) to convey ideas, solve authentic problems, and document their progress over time.	M	I	I	I	R	R
W6, SL2, MP4, MP5	Utilize technology to explore, test, and refine complex ideas through models and simulations.	M	M	I	R	R	R
R7, MP7, MP8	Accept challenges, articulate problems, brainstorm solutions, design prototypes, and test. Persevere and continue towards a solution.	M	M	I	I	R	R

M=Modeled by Teacher I=Introduce Concept R=Reinforce Skill A=Continual Application in Authentic Tasks

sample lessons

We challenge our students to...

know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems

select and use digital tools to plan and manage a design process that considers design constraints and calculated risks

develop, test and refine prototypes as part of a cyclical design process

exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems

Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

NGSS	SMP	Action	K	1	2	3	4	5
Use the above link to explore how these skills align with NGSS: By Practice By Grade	Use the above link to explore how these skills align with the SMP	Identify problems, understand the challenges, and build strategies to conquer.	M	I	R	R	R	A
		Gather and interpret data using the most appropriate digital tools.	M	M	M	I	R	R
		Make meaning of the data to draw reasonable conclusions.	M	M	M	I	R	A
		Understand and complete multi-step instructions and procedures using technology tools such as programming robots and coding with basic computer languages.	M	I	I	R	R	R
		Demonstrate proficiency in software applications, by grade level.	Refer to Technology Proficiency List					

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sample lessons

We challenge our students to...

formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions

collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making

break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving

understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions

Creative Communicator 6

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

Alignment to CCR	Action	K	1	2	3	4	5
R7, W6, W10, SL5, MP5	Create unique digital products through responsible remixing and design. (e.g. Green Screen Production, App Smashing)	**M**	**I**	**I**	**R**	**R**	**R**
W6, W10, SL1,	Use a variety of age-appropriate technologies (e.g. Google Hangouts, Blogs, Explain Everything App, Padlet, GAFE) to communicate and exchange ideas with classmates and the community.	**I**	**R**	**R**	**R**	**R**	**A**
W6, SL5, MP4, MP5	Design and publish visual or physical models of complex ideas, using tools such as slideshows, working models, 3D printing projects, videos, animations, etc.	**M**	**M**	**I**	**I**	**R**	**R**
W2, W6, W10, SL1 SL5 MP1	Participate in collaborative technology projects to solve real-world problems, and communicate their findings to a variety of audiences.	**M**	**M**	**M**	**I**	**R**	**R**

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sample lessons

We challenge our students to...

choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication

create original works or responsibly repurpose or remix digital resources into new creations

communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations

publish or present content that customizes the message and medium for their intended audiences

Global Collaborator 7

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

Alignment to CCR	Action	K	1	2	3	4	5
R7, W6, W10, SL5, MP5	Work collaboratively online to develop empathy and an understanding of local and global perspectives.	**M**	**M**	**M**	**I**	**I**	**R**
W6, W10, SL2, SL5	Use digital tools (e.g. Google Hangouts, Google Earth, Google Maps, Google Treks) to encourage cultural understanding and global awareness.	**M**	**M**	**I**	**I**	**R**	**R**
SL1, SL6	Define and assign roles for collaborative projects and perform those duties to accomplish the group's goals (e.g. producer, director, writer, editor; manager, researcher, scribe, presenter).	**M**	**M**	**M**	**I**	**I**	**R**
W6, SL5,	Create and publish work to support the promotion of civic engagement (e.g. managing a canned food drive, publicizing service projects, organizing donations for charitable causes, creating public service announcements).	**M**	**M**	**M**	**I**	**I**	**I**

M=Modeled by Teacher **I=Introduce Concept** **R=Reinforce Skill** **A=Continual Application in Authentic Tasks**

sample lessons

We challenge our students to...

use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning

use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints

contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal

explore local and global issues and use collaborative technologies to work with others to investigate solutions