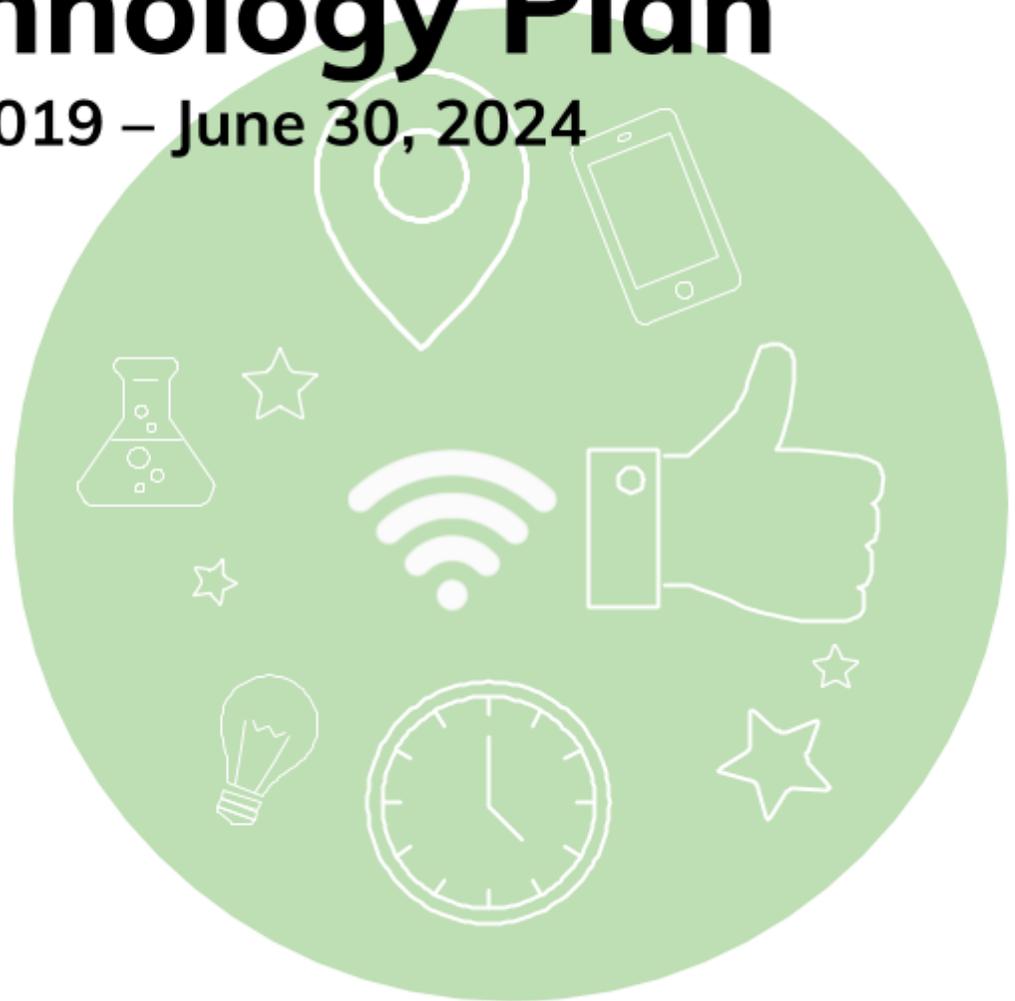# Technology Plan

July 1, 2019 – June 30, 2024

Cambrian School District

4115 Jacksol Drive, San Jose, California 95124

Cambrian School District
Technology Plan 2019 – 24

Executive Summary

The Cambrian School District Board of Trustees believes that our clearly stated mission, vision, and direction for the District provides the foundation for continuous improvement and accountability. We are a student-oriented District where children come first and our fundamental purpose and focus continues to be student learning. The Board and Dr. Carrie Andrews, Superintendent, have supported the alignment of technology usage in our district with the goals and principles reflected in the Strategic Plan 2018-23. To meet this objective, the Director of Education Technology, Jacqueline Smith, guided a Technology Task Force to develop Technology Plan 2019-24.

This student-centered, five-year Technology Plan is designed to support the implementation of Cambrian School District's Strategic Plan and Local Control Accountability Plan (LCAP). It is essential to our core mission statement, "to provide a caring and collaborative community that develops creative and critical thinkers who communicate effectively, value diversity, and are ready to excel in a global society," to provide equitable, consistent and sustainable access to technology, digital tools, and next-generation learning opportunities.

The future of technology in the Cambrian School District is defined through this Technology Plan. The plan provides a framework to ensure each student in our schools has the opportunity to develop as a communicator, collaborator, critical problem solver, creator, innovator, and global contributor. These next-generation core competencies require students to master not only state content standards, but also digital literacy and the ability to apply critical thinking and problem-solving skills in learning and in life. In addition, we foster the development of the communication and collaboration skills required to become successful citizens and contributing members of today's ever-changing global society.

All students in our schools should have regular opportunities to engage in creativity, critical thinking, collaboration, and communication. Educators and leaders in our school system, therefore, must make sound, evidence-based

pedagogical decisions around integrating technology thoughtfully into instruction to ensure positive student learning outcomes. This plan guides those decisions.

The goals outlined in this Technology Plan were built on the foundations of and align with the district's Strategic Plan and LCAP. The Future Ready Schools® Framework was used as a guideline for developing the plan and has been used nationally to help district leaders plan and implement personalized, research-based digital learning strategies, so all students can achieve their full potential. The structure was designed around the research and belief that every student deserves a rigorous, personalized learning environment filled with caring adults and student agency.

Table of Contents

Introduction to the Technology Plan

Background of the Technology Task Force and the Technology Plan development Process

Charter of the Technology Task Force

Create a student-centered five-year District Technology Plan recommendation that:

- Supports Cambrian's Strategic Plan (2018-23) and LCAP Goals.

- Ensures equitable, consistent, scalable, and sustainable access to and use of technology and digital tools for all students.

- Supports an open, flexible, robust digital learning environment.

- Insures data safety and privacy while promoting best practices in digital citizenship.

- Anticipates future innovation and technology that supports personalized learning.

- Creates a transparent environment that communicates to all stakeholders.

- Is rooted in evidenced-based best practices and driven by innovation and creativity.

- Includes a defined process for an annual review to amend the plan, as necessary, to meet evolving needs and emerging technologies.

- Is comprehensive enough to include the following three initiatives:

    - Initiative 1 – Digital Curriculum, Tools, Data & Assessment

    - Initiative 2 – Instructional Practices & Professional Learning

    - Initiative 3 – Infrastructure, Hardware & Security

Technology Task Force Approach

Technology Task Force (TTF) brought together a diverse team of stakeholders from December 2018 through April 2019. The Task Force was led by Jacqueline Smith, Director of Educational Technology and Steven McGriff, Ph.D., Education Consultant. This team worked collaboratively to create this five-year Technology Plan recommendation to be presented to Dr. Carrie Andrews, Superintendent, and on behalf of staff to the Cambrian School District Governing Board in April 2019.

During a series of four day working meetings, the TTF reviewed the current state of technology in the district, researched evidenced-based best practices, and envisioned possible future uses of technology to support both the Strategic Plan and LCAP Goals. The product of the TTF is this five-year Cambrian School District Technology Plan (2019-24).

Technology Task Force Team Members

The TTF included representatives from the following stakeholder groups: teachers, parents/community, staff, district leadership, and governing board. In addition, stakeholder feedback opportunities were provided during a parent input night and presentations at Instructional Leadership Council and school site staff meetings. Student input was essential to this process. To minimize the time students were away from class, student voice was incorporated into the plan through survey data, groups discussions, and field trips to classrooms.

Jacqueline Smith	Director of EdTech, Co-Facilitator
Steven McGriff, Ph.D.	Education Consultant, Co-Facilitator
Jen Atkins	Price 6-8th Grade Teacher
Jack Byrd	Price Parent
Sanjit Chadha	Bagby Health/Attendance Clerk
Chau Chieng	TOSA/Steindorf 6-8th Grade Teacher
Debbie Clima	Farnham 2nd Grade Teacher
Emily Cooper	Price SPED Teacher
Richard Cortez	Help Desk Technician
Tylor Dominguez	Farnham Parent
George Drew	Steindorf Parent
Raychelle Fordham	Sartorette 1st Grade Teacher
Christa Healy Easwara	Fammatre, Price Occupational Therapist Consultant.
Janelle Lam	Steindorf 1st Grade Teacher

Lisa Landsberg	Steindorf 5th Grade Teacher
Lisa MacFarland	Fammatre Principal
Jason Martorano	Sartorette Parent
Maria Montes	Bagby 2nd Grade Teacher
April Nguyen	Sartorette RSP K-5 Teacher
Linh Nguyen	Assist. Superintendent of Ed Services
Liz Parker	Fammatre 3rd Grade Teacher
Stacey Patrick	Steindorf K Teacher
Claudia Peng	Bagby Parent
Carol Presunka	Board of Trustees, Parent
Kelley Radcliffe	Bagby Parent
Amjith Ramanujam	Farnham Parent
Mujtaba Rauf	Director of IT
Debra Saunders	Price Parent
David Selleos	Steindorf, Bagby Parent
Penny Timboe	Chief Financial Officer
Paul Turner	Price Parent
Priyanka Tyagi	Fammatre Parent
Tom Vo	Help Desk Technician
An Vo	Fammatre Parent
Tiffany Wendt	Sartorette Parent
Sarah Wilson	Steindorf 6-8th Grade Teacher

Data used to inform the development of the Technology Plan

In an effort to be responsive to the needs of students, teachers, and parents, we reviewed school district data gathered through the annual CSD LCAP Survey, Staff Professional Learning Survey, and the Clarity BrightBytes Technology and Learning (T&L) Survey. The BrightBytes T&L Survey is based on the Classroom, Access, Skills, and Environment (CASE) Framework to help identify strengths and areas of focus within the school system. The TTF reviewed data results from the last three years which was used to inform the recommendations in this plan. In addition, technology plans from other California school districts, including local bay area districts, were analyzed to identify and incorporate best practices.

The following BrightBytes data helped identify and prioritize goals related to the three initiatives of the Technology Plan (Digital Curriculum, Tools, Data & Assessment; Instructional Practices & Professional Learning; Infrastructure, Hardware & Security).

Figure 1: Classroom and Environment

While improving over the last three years, these are still the top focus areas for Cambrian within the Classroom, Access, Skills, and Environment (CASE) Framework.
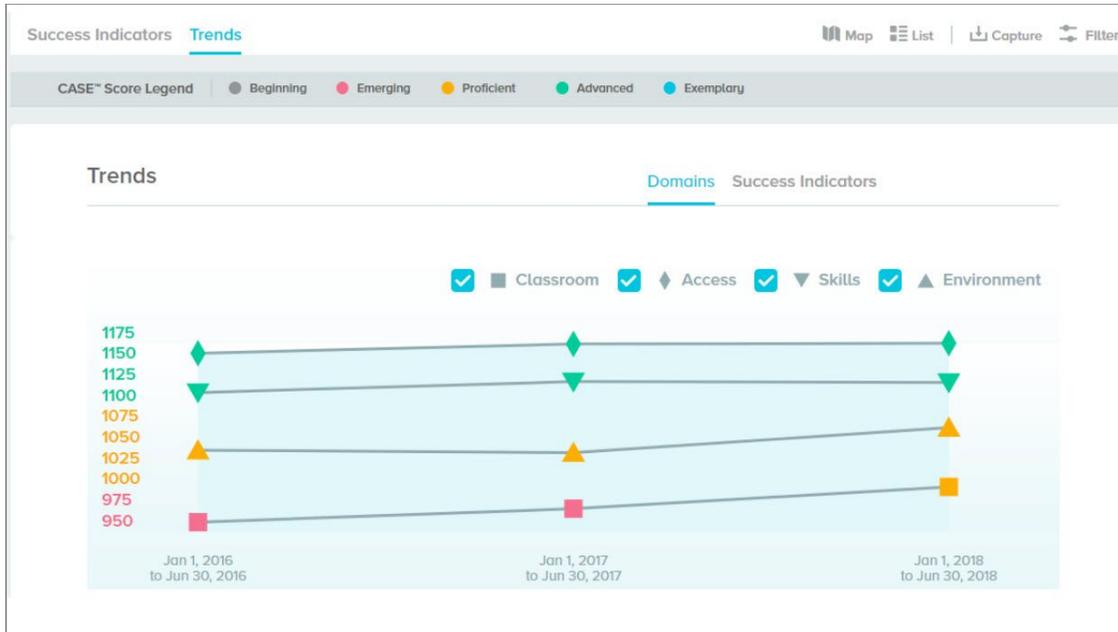
Figure 2: Classroom teacher and student use of the 4Cs

Teacher and Student Use of the 4 Cs (Communication, Collaboration, Creativity, and Critical Thinking), Digital Citizenship, and Assessment are all areas of priority.

Figure 3: Access to technology

Access is Advanced or Exemplary at school and at home. This plan sets forth goals to maintain or improve current access.
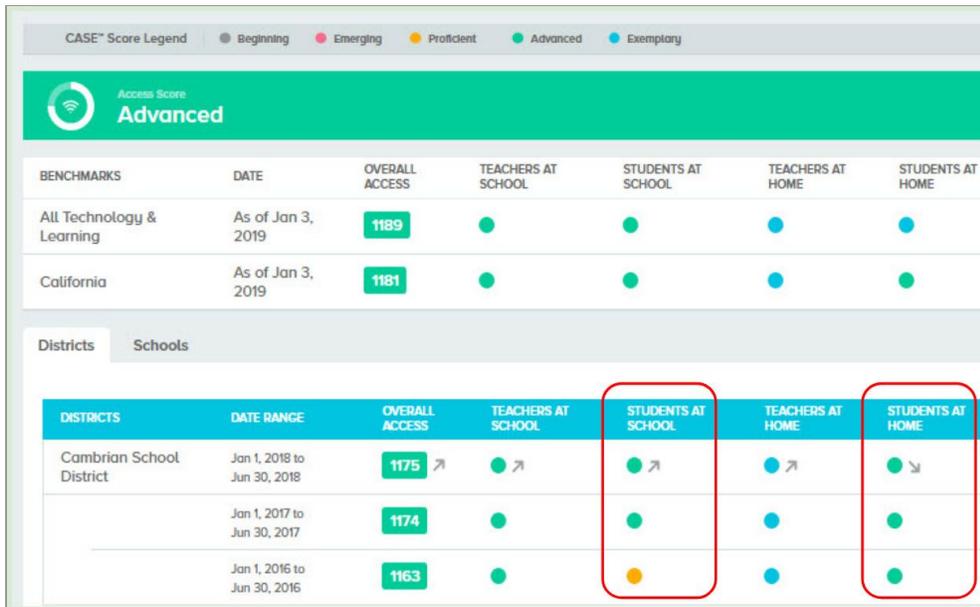
Figure 4: Skills

Teacher and student foundational, online, and multimedia skills are areas of focus to achieve or maintain an advanced rating.
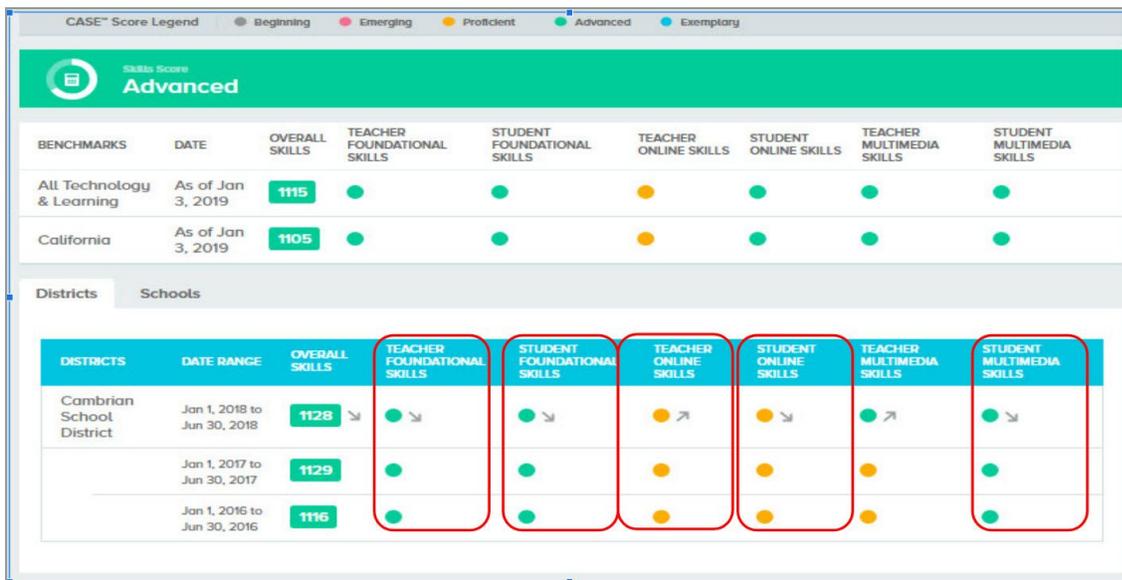
Figure 5: Professional Learning and Support

These are a priority focus area with the goal of moving from Emerging to Advanced.
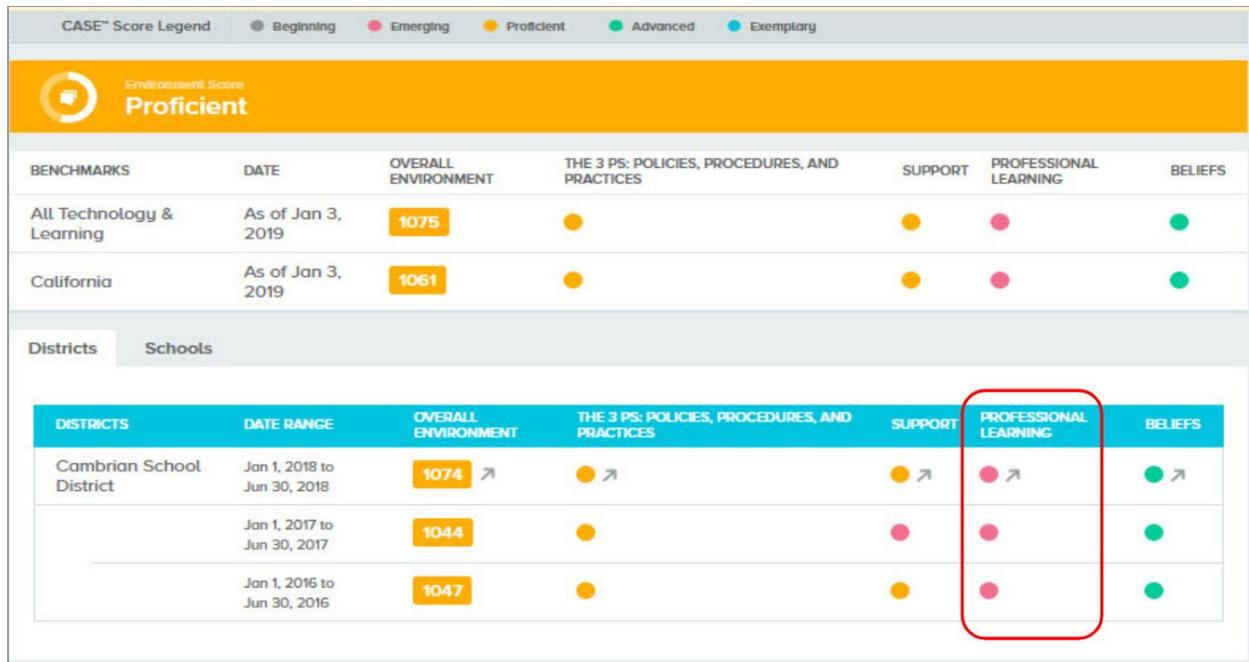
Technology Plan Duration And Review Process

The benchmarks and timelines in this Technology Plan will guide our district's use of technology from July 1, 2019 – June 30, 2024, with annual review and minor revisions in years 1 and 2, followed by a significant revision in year 3.

The Technology Department will be tasked to review the Technology Plan twice annually in August and January to prioritize work, monitor progress towards goals, define goals, objectives, and metrics, as well as report updates to district leadership. In April each year a district Technology Committee consisting of stakeholder representatives will be formed to complete an annual review of the plan. The timing aligns with the district budget and LCAP planning processes. Technology Plan updates, adjustments, and recommendations will be presented to the Governing Board before the end of June every year.

Technology Plan Alignment with Cambrian Mission and Strategic Direction

Introduction

The Technology Plan Initiatives and Goals outlined in this document have been developed to support the specific goals set by the Governing Board of Trustees and staff outlined in the Cambrian School District Strategic Plan and LCAP and are in alignment with Cambrian's mission, core values, core beliefs, and vision.

Mission

Cambrian School District, a caring and collaborative community, develops creative and critical thinkers who communicate effectively, value diversity, and are ready to excel in a global society.

Core Values

All Children...

- Have value

- Deserve respect

- Can learn

- Can succeed

- Have a right to the best education possible

- Can be lifelong learners

Core Beliefs

We believe in...

- Valuing and teaching the whole child

- Preparing all Cambrian students to be successful in addressing the challenges of the 21st century as global citizens

- Honoring and encouraging the strengths of every child

- Fostering a strong sense of community and creating a safe, orderly learning environment for all

- Academic excellence that is built through collaboration and teamwork

Vision

The Cambrian School District will be known for its creativity, innovation, academic excellence and maintaining a strong focus on educating the whole child. Our schools will provide a safe, supportive environment for all students. Collaboration of all stakeholders will be at the center of what we do, keeping us focused on a path of continuous improvement.

Our actively engaged students will take control of their education as they are challenged to reach their personal goals and push themselves to new levels of growth and achievement. A rigorous, hands-on curriculum will advance critical thinking and problem-solving skills. The application of 21st-century skills through a variety of authentic learning opportunities will create students who can adapt to the academic, professional, and social demands of the future. Full access to dynamic and sustainable technology will support our e-learners on their diverse educational journeys.

Our amazing team of highly-trained educators and classified staff are supported by a collaborative community of parents, volunteers and business partners who share a commitment to meeting the needs of all students. Through strategic, forward-thinking professional development, staff will continuously hone their craft as they develop and deliver a powerful curriculum that engages all students.

As the heart and soul of the Cambrian community, our district will explore infinite possibilities for learning as we prepare our students to become global citizens and leaders who rise to the challenges of their exciting, diverse, and ever-changing world.

Core Competencies of Cambrian Graduates

Competencies and Enduring Understanding	Communicator	Collaborator	Critical Problem Solver	Creator and Innovator	Global Contributor/Citizen
Attributes	Written Oral Digital Literacy Acute Across Modalities Listening/ Learning	Respectful Engaged Flexible Interdependent Accountable	Problem Solver Creativity Creative Thinker Innovator	Socially Responsible Risk Taking Adaptability Perseverance Motivated	Values and Contributes Meaningfully to: Family School Neighborhood State Nation World Acts as a Global Citizen and Possesses Global Competence Language fluency Global Cultural competency Cultural and Global Understanding
Attributes the system is going to nurture					
Fundamental Attributes	Emotional Intelligence Integrity Personal Responsibility		Intuitive Positive Growth Mindset Passionate		Resilience & Ability to Improve Self-Advocacy Self-Directed

Strategic Plan Goals (2018-23)

SP Goal 1: NEXT GENERATION STUDENT We will provide rigorous, highly engaging learning opportunities that will prepare all students to be successful global learners, contributors, and leaders.

SP Goal 2: STUDENT LEARNING AND ACHIEVEMENT Every student will achieve. We will provide and support engaging, high quality instruction that

promotes active learning and achievement for all students. Achievement gaps will be eliminated.

SP Goal 3: RESOURCES (Human and Capital) We will develop and utilize our fiscal resources and people to foster student achievement and the goals of the District.

SP Goal 4: EXTENDED LEARNING We will develop and provide extended learning opportunities to foster achievement, intentional ways to close the achievement gap, and increase all student success.

SP Goal 5: CAMBRIAN CULTURE AND COMMUNITY We will promote a welcoming, transparent and inclusive environment for all parents, families, and community stakeholders as partners in the education and support of all students' success

Local Control Accountability Plan Goals

LCAP Goal 1: High Academic Achievement - The Cambrian School District and school sites will provide high quality and dynamic instruction for all students while preparing them for 21st century college and career readiness.

LCAP Goal 2: Effective Leadership, Teaching and Learning - The Cambrian School District and school sites will provide highly qualified staff through recruitment, retention, and professional development, so every student thrives.

LCAP Goal 3: Positive School Environment, Climate and Culture - The Cambrian School District and school sites will provide a supportive, orderly, and purposeful environment so that students can reach their full academic potential.

LCAP Goal 4: Strong Parent and Community Engagement - The Cambrian School District and school sites will promote a welcoming and inclusive environment for all parents, families, and community stakeholders as partners in the education and support of all student's success in school.

Technology Plan Initiatives Overview

The next section of this technology plan is broken down into three distinct but interdependent initiatives: 1. Digital Curriculum, Tools, Data and Assessment, 2. Instructional Practices and Professional Learning, and 3. Infrastructure, Hardware and Security. Under each initiative a summary of the vision is outlined along with an brief overview of the current state. Most importantly, specific goals and objectives on how to move from the current state to achieve the initiative vision are documented for each initiative. A fourth section, Summary of Recommendations, appears under Initiative 3 due to the level of detail needed to convey the goals around hardware and infrastructure. The vision, goals, and objectives for each initiative will be reviewed and prioritized during the Technology Plan annual review process.

Initiative 1:
Digital Curriculum, Tools, Data & Assessment

Summary of Vision:
Empowering Student Learning Through Technology

Technology integration into curriculum, instruction, and assessment are based on clear expectations that all students will leave the Cambrian School District equipped with the core competencies required to become global citizens, leaders, and next generation learners in their exciting, diverse, and ever-changing world.

These expectations mandate solid grounding in standards-based content, but also intentionally integrate elements of deeper learning, such as critical thinking, creativity and innovation, problem solving, collaboration and self-direction. Additionally, we will provide opportunities for authentic learning in the context of today's global digital society.

Educators in our district are empowered to leverage technology and diverse learning resources to personalize and make accessible the learning experience for each student. Personalization involves tailoring content, pacing, and feedback to the needs of each student and empowering students to become assessment-capable learners and take ownership of some aspects of their learning.

We provide digital learning environments in which students have authentic work experiences similar to those in the larger society. Students collaborate with educators, fellow students, and others both within and outside of the school environment on projects that often (1) involve the creation of knowledge products, (2) foster deep learning, (3) creatively solve problems, and (4) have value beyond the classroom walls.

Personalized and Competency-Based Learning integrates student voice and choice, flexible paced learning with timely support, and demonstration of academic proficiency. Pace of learning is flexible based on the needs of individual students and the challenges of complex, often project-based work. Timely support is provided to accommodate learning needs and guarantee access to content and resources. Upon mastery of explicit, measurable, and transferable outcomes that demonstrate the application and creation of knowledge, learners move on to a new, targeted standard or course. Digital learning enables students to productively use time during and beyond the school day, often redefining homework time.

The International Society for Technology and Education (ISTE) standards for students and educators are used as a framework to identify goals in this plan to ensure our students and staff achieve the technology skills required for Next-generation teaching and learning.

Furthermore, the district and its schools use technology as a vehicle for diagnostic, formative, and summative assessment. Through Multi-Tiered Systems of Support (MTSS) initiatives, the school system has structures and tools in place for using data to improve, enrich, and guide the learning process. Data is also used to identify and provide targeted learning interventions, as needed, and provides educators with the data needed to determine whether or not the intervention is working and when to remove the intervention. Educators actively use data to guide choices related to curriculum, content, and instructional strategies.

Current State of Digital Curriculum, Tools, Data & Assessment:

Cambrian students have access to and are using technology for learning and assessment at school every grade level at all school sites. However, there is a need to have a district-wide scope and sequence around foundactional digital literacy skill development and equal opportunities for students across the district. Although students are using technology routinely, explicit learning about digital citizenship and responsible online behavior has been inconsistent. Equity of access to innovative, Next-generation learning opportunities is another area for

development. Empowering all students to leverage technology to allow for differentiation in learning and demonstrating knowledge is an emerging focus area.

Figure 6 and Figure 7: BrightBytes Data

Through Cambrian's annual BrightBytes survey, students self-report that their Digital Citizenship, Online Skills and Foundation Skills are still emerging. Most students have not yet reached proficiency and/or advanced mastery. Additionally students report that they are not frequently provided opportunities to write, take assessments and and collaborate online.

"Although today's students are digital natives with many skills in social networking, the majority of them are not social learners with the ability to apply complex technology skills to everyday challenges. In today's world, a proficient employee needs to be computer literate, visually literate, information literate, media literate, and digitally literate." - *Adobe Education research report*

Figure 6
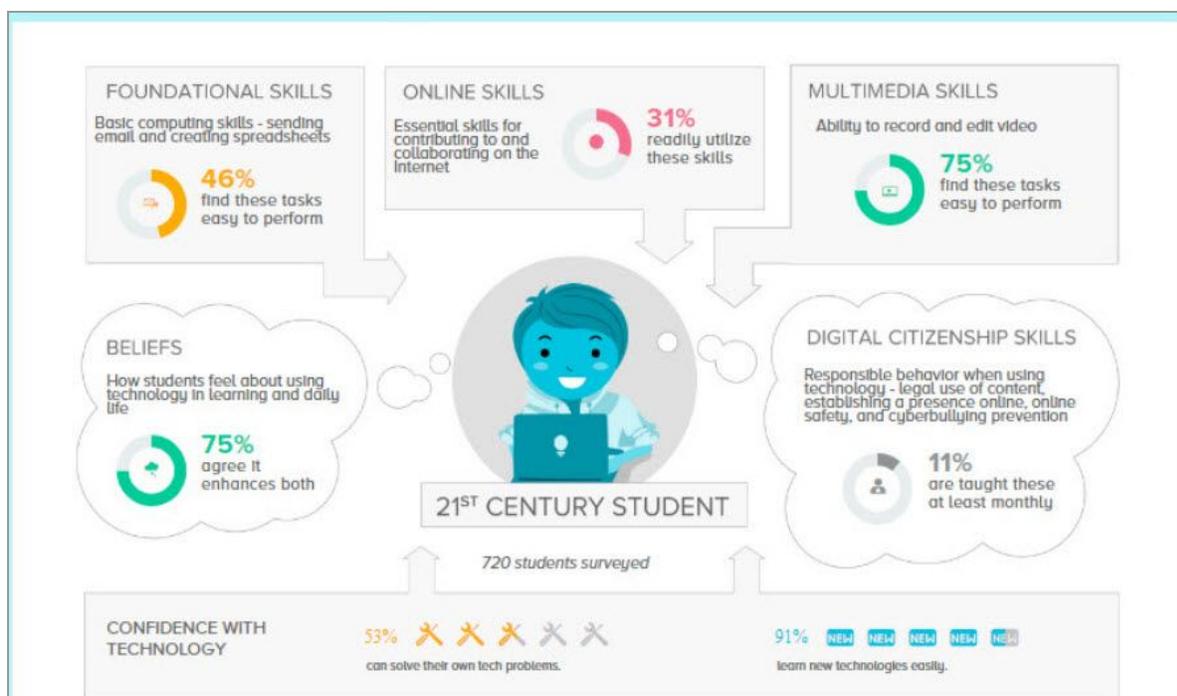
Figure 7
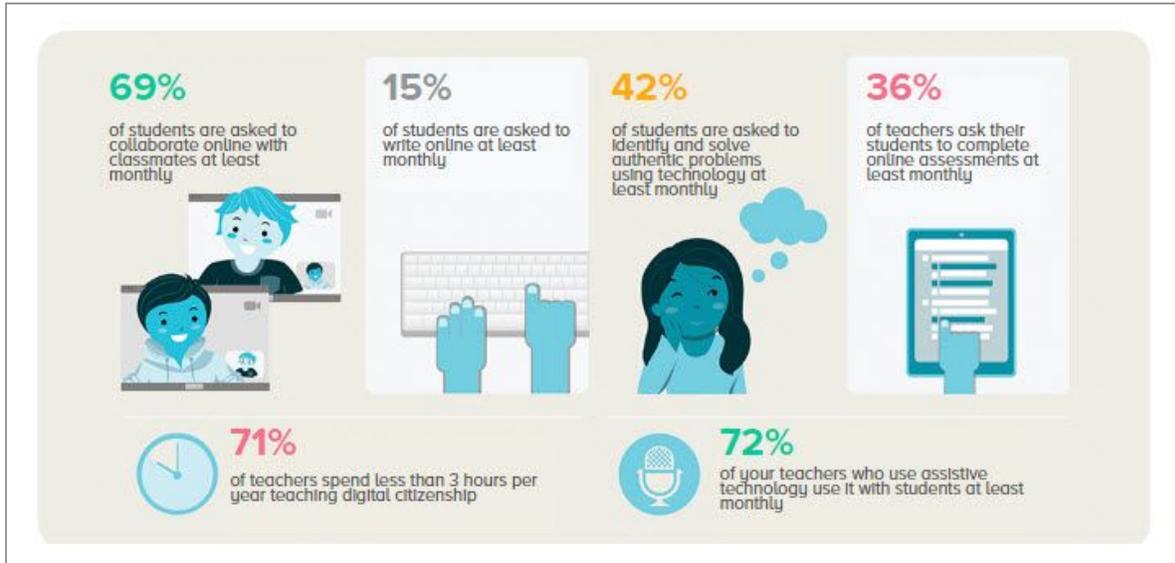
Figures 8, 9, and 10: Cambrian School District LCAP Parent Survey Results March 2018

Many parents are not sure if current technology use is helping their student's achievement and creativity. Parents want to know what digital tools we are using, how they are being used and that we are helping students develop as safe and responsible Digital Citizens.

Figure 8 Survey responses about school's technology tools and resources

The school's technology tools and resources have:	Strongly Agree	Agree	Disagree	Strongly Disagree
Improved my student's ability to produce quality work	23%	59%	16%	2%
Improved my student's engagement	25%	58%	14%	3%
Improved my student's performance	20%	56%	22%	2%
Enabled my student to do something he/she couldn't have done otherwise	21%	47%	30%	3%
Did not have any noticeable impact	9%	32%	44%	16%

Figure 9 LCAP Survey Results
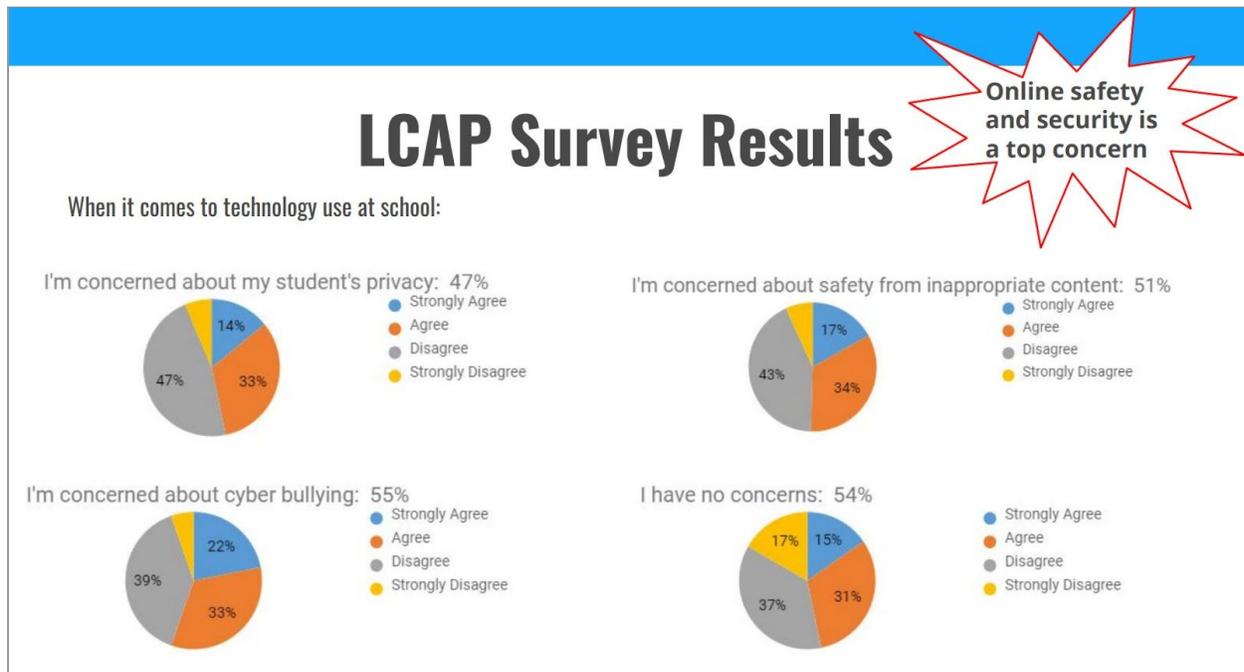
Figure 10 Themes from LCAP Survey
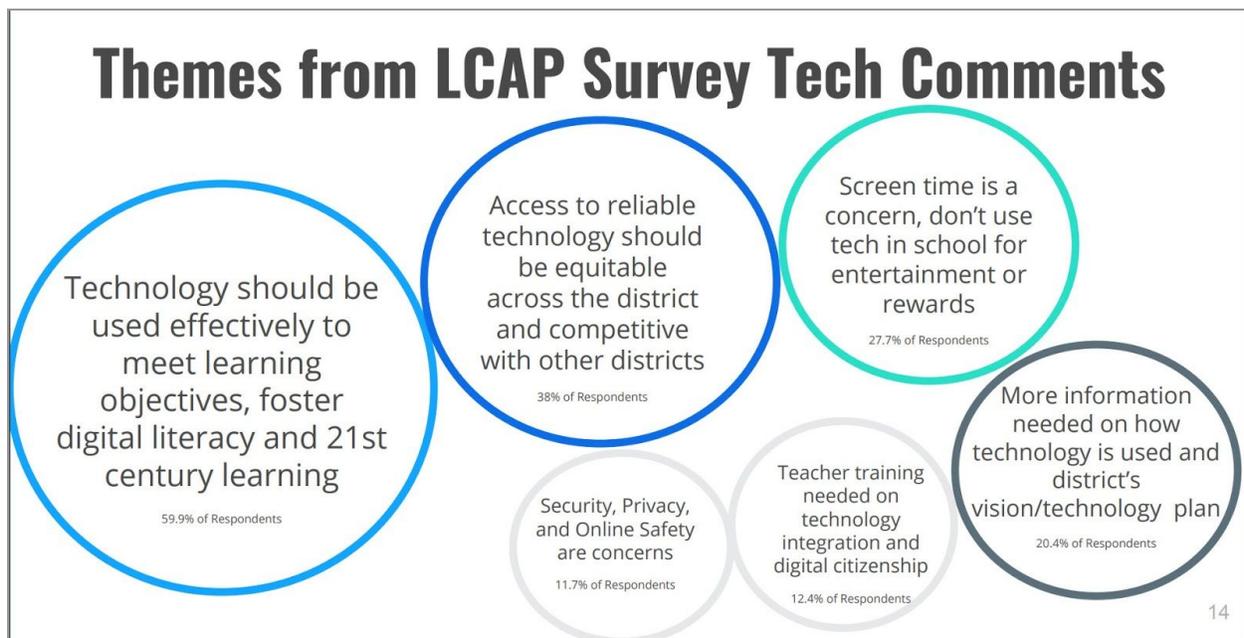
GOALS: Initiative 1 - Digital Curriculum, Tools, Data & Assessment

To build upon and expand the current practices and achieve the vision of the Technology Plan, Strategic Plan and LCAP goals, the District should consider the goals described below.

Key: TP = Technology Plan   SP = Strategic Plan   LCAP = Local Control Accountability Plan

Initiative 1 - Digital Curriculum, Tools, Data & Assessment	
TP Goal 1.1: All students have access to develop the digital literacy skills outlined in the ISTE Standards for Students in order to learn and demonstrate mastery of California state standards and to develop Cambrian's Next-generation core competencies. (SP Goal 1 & 2; LCAP Goals 1 & 2). See supporting TP Goal 9 under Initiative 2 - Instructional Practice & Professional Learning.	
When	**Objectives**
2019-20	1.1.1 All school sites adopt CSD Technology Skills Scope and Sequence (CSD TSSS) matrix to Support Teaching and Learning. Ed Tech Team provides year 1 training at multiple skill levels and support resources both online and in the classroom. Implement Year 1 skills on matrix in at least 60% of classrooms. Success indicators per BrightBytes Survey: 60% or more of students at proficiency or better on Student Foundational Skills (current 46%), Online Skills (current 31%), Write Online Monthly (current 15%); and Complete Monthly Online Assessments (current 36%).
2020-21	1.1.2 Implement Year 1 skills on CSD TSSS in 100% of classrooms. Implement Year 2 skills in 60% of classrooms. Success indicators per BrightBytes Survey: 80% or more of students at proficiency or better on Student Foundational Skills, Online Skills, Write Online Monthly, and Complete Monthly Online Assessments.
2021-22	1.1.3 Implement Year 2 skills on CSD TSSS in 100% of classrooms. Review and revise CSD Technology Skills Scope & Sequence to integrate new technologies and/or standards. Identify and document Year 3 and Year 4 skills. Success indicators per BrightBytes Survey: 95% of students at proficiency or better on Student Foundational Skills, Online Skills, Write Online Monthly, and Complete Monthly Online Assessments.
TP Goal 1.2: Utilize technology to personalize learning, integrate student interests, allow for differentiation in demonstrating mastery of content, and to provide access to	

	content to meet the diverse needs of all learners. (SP Goal 1 & 2; LCAP Goals 1&2)
2019-20	1.2.1 Create a Digital Accessibility Strategies Toolkit for teachers to empower student choice in how they access digital content and demonstrate mastery of learning. Define implementation plan and train staff. 1.2.2 Identify additional digital tools and/or curriculum to accelerate and deepen student learning by tailoring instruction to each student's individual needs, skills and interests.. Ensure students have continued access to existing personalized learning tools already in place (eg. Imagine Learning) and monitor performance towards usagean success criteria goals. 1.2.3 Define technology needs to support Strategic Plan Goal of Student Passion Projects. Identify objectives, scope and digital artifacts of projects. Implement at one school site. Showcase digital artifact/portfolios district wide. 1.2.4 Assess interest and needs around integrating and/or expanding maker learning experiences at school sites and develop support/implementation plan.
2020-21	1.2.5 Refine and further develop Digital Accessibility Strategies Toolkit to empower students to create content that is accessible to all learners. 1.2.6 Implement new digital curriculum/learning platforms that personalize student learning by adapting to individual student needs/mastery of content. 1.2.7 Support Implement Passion Project at 3 school sites.
2021-22	1.2.8 Support implement Passion Project at all 6 school sites.

TP Goal 1.3: Support district-wide selection, adoption, and implementation of digital curriculum, assessments, and tools needed to facilitate and measure student learning and achievement. (SP Goal 1 & 2; LCAP Goal 1)	
2019-20	1.3.1 Assess new digital curriculum/supporting tools, required digital literacy skills, prioritize support needs, and write implementation plan and determine success criteria for digital components of ELA/ELD, NGSS, Computer Science standards, Math.
2020-21	1.3.2 Implement plan for digital components of curriculum for ELA/ELD, NGSS, Computer Science Standards and Math. Success indicators: 100% of students have access to and are meeting usage goals of online curriculum as measured by digital tool usage indicators. 1.3.3 Assess new digital curriculum/supporting tools, required digital literacy skills, prioritize support needs, and write implementation plan for digital components of History/Social Science Framework, PE, Music and Art programs.

2021-22	1.3.4 Analyze success/outcomes of implementation of digital components of ELA/ELD, NGSS, Computer Science Standards and Math. 1.3.5 Implement plan for digital components of History/Social Science Framework, PE, Music and Art programs.

TP Goal 1.4:
Integrate technology tools and devices with the intention that student learning environment creates a culture of innovation that fosters growth for all students as a communicator, collaborator, critical problem solver, creator and innovator, global contributor/citizen. (SP Goals 1, 3, LCAP Goal 1)

2019-20	1.4.1 Conduct technology integration needs analysis with site administrators based upon LCAP goals. Refine Technology Plan Goals to ensure alignment with site LCAPs. Make recommendations for next steps.

TP Goal 1.5:
Use data to identify and inform program needs, personalize learning, and to support the work of site and grade level MTSS achievement teams in identifying criteria for meeting and monitoring existing and additional support programs. (SP goal 2 and 3, LCAP goals 1,2,3)

2019-20	1.5.1 Work with MTSS Achievement teams to identify data monitoring needs to personalize learning and improve achievement for all students. Create data maps from existing systems/tools and make recommendation on best method to make data accessible to teachers and administrators. 1.5.2 Determine feasibility of creating with existing tools a data dashboard that provides teachers and administrators with an easy to access, composite picture of each student's data (achievement/assessment data, grades, absence, behavior, SEL, interventions….). 1.5.3 Evaluate products and potentially select a composite student data dashboard tool (or digital cumulative folder) to pilot to meet MTSS data monitoring needs. Plan, pilot and write success criteria. 1.5.4 Continue to support ongoing CAASPP, district and site level formative and summative assessments.
2020-21	1.5.5 and 1.5.6 Create internal student data dashboard (i.e. digital cumulative folder) OR pilot a third party student data dashboard at one grade level per school site. Monitor success and make go/no go decision for full implementation.
2021-22	1.5.7 or 1.5.8 Implement student data dashboard solution at all sites

TP Goal 1.6:
Create, document and implement a process for staff at each school site to introduce, pilot and use new supplemental digital curriculum and tools that

	includes defined success metrics to determine if usage should stop, continue and/or expand. (SP goal 1, 2, LCAP goals 1,2)
2019-20	1.6.1 Consolidate and evaluate data from App Responsibly! (internal digital tool/curriculum tracking database) to ensure tools currently being used are vetted for student privacy compliance and meet learning objectives around student achievement and the Next-generation competencies. 1.6.2 Create a process and framework through which teachers and principals adopt new technology or digital tools to advance students' next generation skills and/or student academic achievement, measure results and make informed decisions around whether or not to continue usage. Document and share results district-wide in central place (ie. Google Form, matrix, staff portal).

TP Goal 1.7:
Empower students by building capacity to support teachers with innovative technology integration into the classroom. (SP Goals 1,3 and LCAP Goals 2, 3)

2019-20	1.7.1 Evaluate Success of GenYES pilot at (one 6th grade class at Price in 2018-19) to develop Student Technology Leaders (STLs) to help support teachers with Google Suite Applications integration. Successful STLs have option to be placed as Technology Aides during elective period. Success criteria: 80% or more of Technology Assistance Projects (TAPs) completed to requestor's satisfaction. 80% of TAP requestors rate quality of work Good or Excellent. At least 3-5 students identified to become Student Technology Leaders for 2019-20 school year. 7.2 If success criteria met in 8.1, expand GenYES program to 1 additional middle school class & 5th grade classes. Define elementary support model offered by STLs.

TP Goal 1.8:
Educate students in making responsible digital choices by integrating Digital Citizenship lessons into each school site's PBIS program (SP Goals 1,2,4 and LCAP Goals 1, 3, 4)

2019-20	1.8.1 Each school site's Positive Behavior Interventions and Supports (PBIS) team will integrate CSD Digital Citizenship curriculum created in 2018-19 to ensure all students receive understand technology expectations and safe and responsible digital behavior. Site PBIS team creates behavior charts/expectations for interacting in the digital world. 1.8.2 PBIS teams will roll out new expectations and guidelines to their students and community. 1.8.3 Curate, document and provide Digital Citizenship resources for parents. Partner with school site administrators to communicate with parents and staff.

Initiative 2:
Instructional Practices & Professional Learning

Summary of Vision:
Teaching with Technology and Learning to Teach with Technology

Cambrian School District educators integrate learning-enabling technology seamlessly into the teaching and learning process. They have the skills to adopt multiple, highly effective learning technologies and adapt to diverse, evolving learning structures to assure that the use of technology adds value to the learning process.

Teachers, administrators, and other education professionals actively support their own professional practices by using technology, eLearning, and social media to optimize learning and teaching. They are actively taking responsibility for their own professional growth through professional learning networks, online communities of practice, eLearning, and social media (e.g., Twitter feeds, EdCamps, blogging and following bloggers, on-demand videos, etc.). Educators will have access to collaborative tools and digital environments that break down classroom, school, and district walls. Professional development encourages, facilitates, and often requires that they individually and collaboratively create, join, and sustain professional networks both within and outside of the district, frequently leveraging the latest in social media. The district should establish flexible policies and practices that encourage and credit the personalization of professional learning for teachers, administrators, and other education professionals.

Educators have the opportunity to expand their knowledge and skills to address a Next Generation focus (e.g., critical thinking, collaboration, creativity, communication, technology competencies, self-direction, information literacy, etc.). Professional learning includes immersion in the learning sciences research to provide support and insights into more student-centered instructional practices and for the purposeful promotion of deeper learning/Next Generation competencies in all students. Educators master a variety of new, research-based instructional strategies to better engage students and prepare them for college and beyond. In doing so, they broaden their own Next Generation skill set.

Digital leaders model new types of professional learning and ensure that educators have access to (and the technology savvy necessary to leverage)

professional development opportunities that are diverse, customizable, and often supported by the latest technologies. Professional learning is available anytime in a variety of modes. Alternative models are supported through coherent policies and practices in the district.

Current State of Instructional Practices & Professional Learning

All Cambrian teachers and administrators have access to and utilize technology on a routine basis. Digital curriculum and assessments are administered at all grade levels. Staff are beginning to utilize data more effectively to identify student, site and program level needs. Professional development around technology integration is a priority for the majority of our teachers, yet time, funding and resources to provide the training is lacking. In order to provide students with Next-generation learning opportunities, we need to provide our teachers with the training and job-embedded support necessary to move towards instructional practices that facilitate more transformative digital learning experiences. Collaboration as well as leveraging and empowering existing staff expertise is an area to develop.

Moving forward, a district wishing to maximize their integration of emerging technology, should consider using a meaningful instructional technology framework through which teachers can plan and reflect on technology integration in their classroom. The framework should allow teachers to determine if technology use better meets student needs and learning objectives and can inform which future directions and improvements should be pursued. The two most common frameworks currently discussed in education technology literature are the SAMR Model (Substitution, Augmentation, Modification, and Redefinition) and TPACK Framework (Technological Pedagogical Content Knowledge).

TPACK and SAMR: Models of Technology Integration

Technological Pedagogical Content Knowledge (TPACK) Model (Figure 11) is a framework representing the overlapping teacher "knowledge" circles required to effectively integrate technology in the classroom. The three major circles of the diagram include: Content Knowledge - knowledge about the subject matter. This includes knowledge of concepts, theories, ideas, organizational frameworks, practices and approaches toward developing such knowledge. Pedagogical Knowledge - knowledge and understanding of how students learn, general classroom management skills, lesson planning, and student assessment.

Technological Knowledge - knowledge of, and ability to use various technologies, technological tools, and associated resources. (See TPACK.org)

The Substitution, Augmentation, Modification, and Redefinition (SAMR) Model (Figure 12) is a model designed to help educators infuse technology into teaching and learning. Popularized by Dr. Ruben Puentedura, the model supports and enables teachers to design, develop, and infuse digital learning experiences that utilize technology.
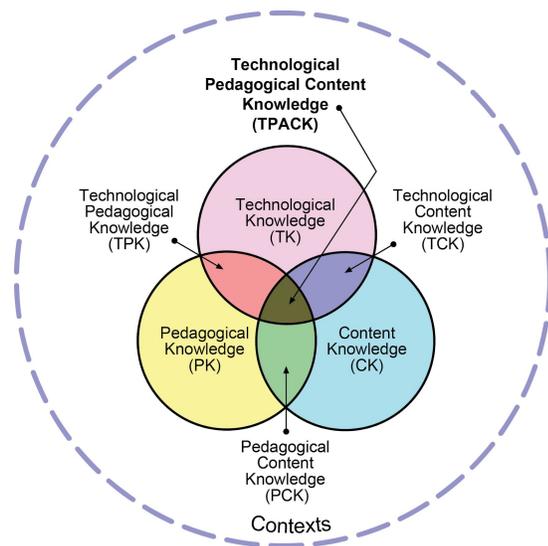
Figure **11 TPACK**   *Figure* **12 SAMR**
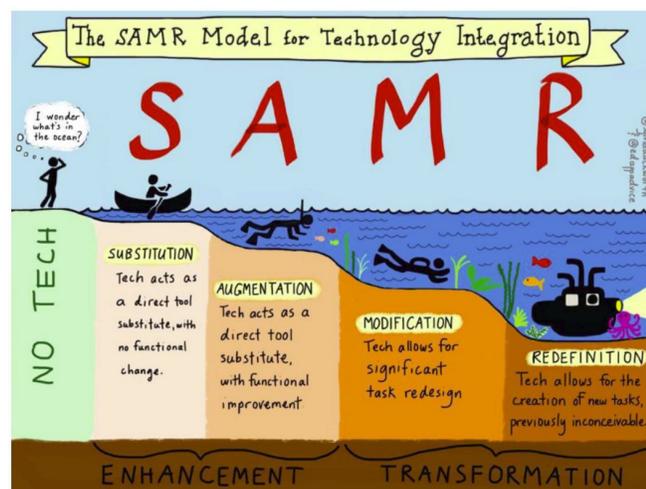
Application of SAMR (Figure 13) within the district can be seen in a May 2019 BrightBytes Survey, where only 9% of our teachers feel they have the skills and training needed to transform classroom learning beyond Substitution and Augmentation using digital technologies.

Figure 13 Application of SAMR
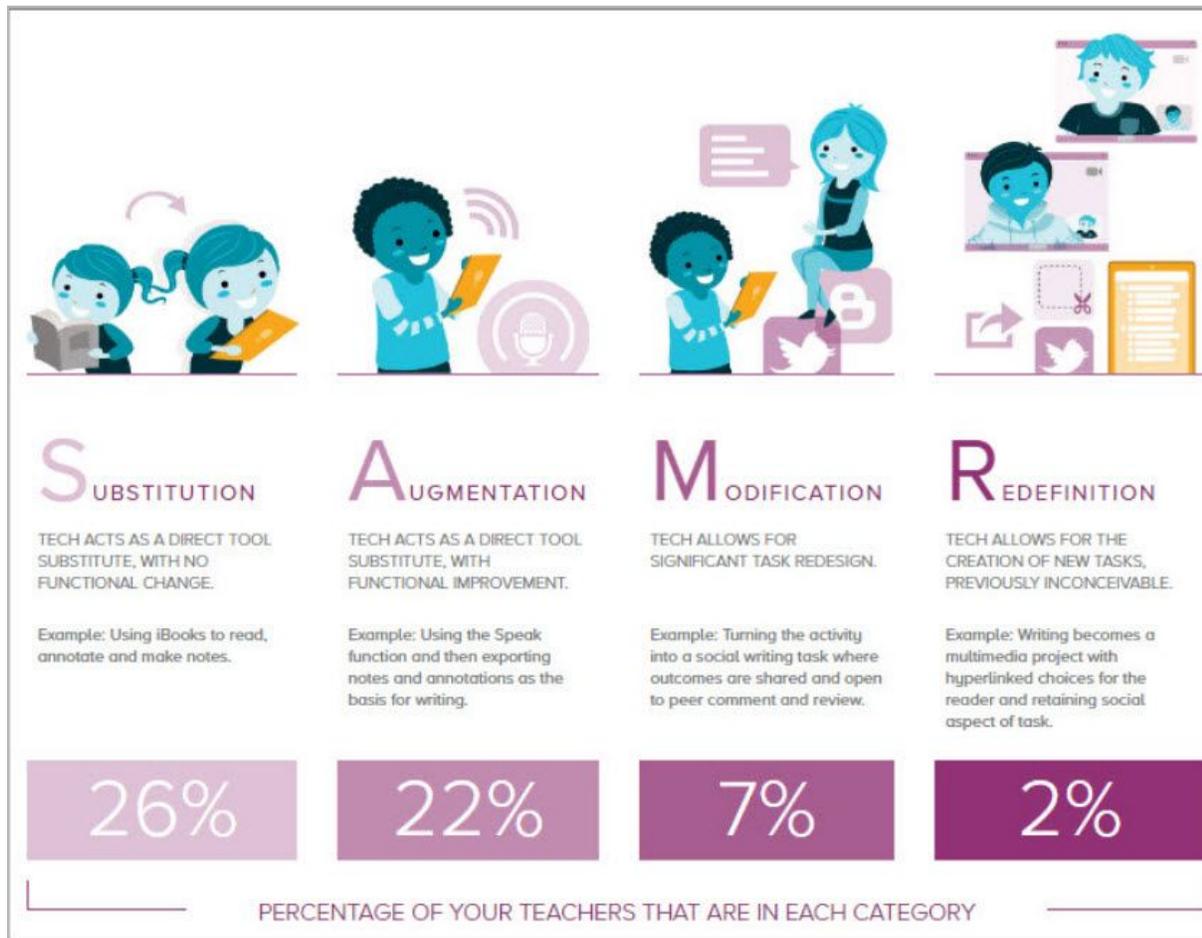
Per the May 2018 BrightBytes Survey (Figure 14) and the spring 2018 Cambrian Professional Learning survey (Figure 15) Professional development around Digital Citizenship, Multimedia and Foundational Technology skills and integration is a priority.

Figure 14 BrightBytes Survey on Professional Development
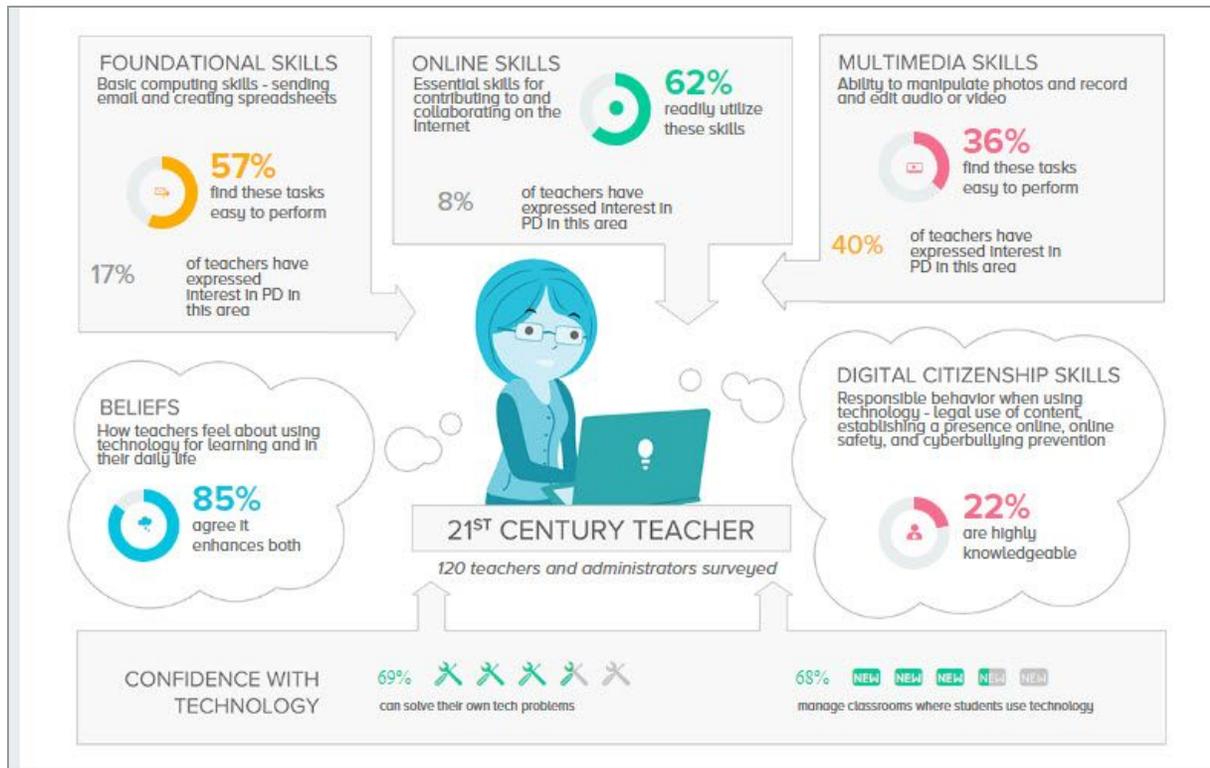
Staff Professional Learning Survey Results - Spring 2018 (Figure 15) reveal the need for technology integration around digital tool and curriculum support.

Figure 15 Cambrian Professional Learning Survey
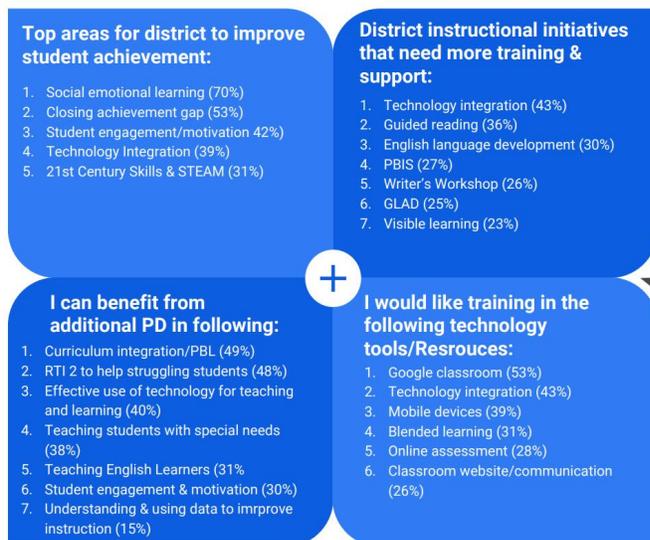
GOALS: Initiative 2: Instructional Practices & Professional Learning

To build upon and expand the current practices and achieve the vision of the Technology Plan, Strategic Plan and LCAP goals, the District should consider the goals described below.

Key: TP = Technology Plan   SP = Strategic Plan   LCAP = Local Control Accountability Plan

Initiative 2: Instructional Practices & Professional Learning	
TP Goal 2.9: All school sites adopt <u>CSD Technology Skills Scope and Sequence</u> (CSD TSSS) to support equitable access to Next-generation learning for all students. This goal supports TP Goal 1 under Initiative 1: Digital Curriculum, Tools, Data & Assessment. (SP Goals 1, 2, 3 and LCAP Goals 1,2	
When	**Objectives**
2019-20	2.9.1 Create and deliver training and resources to all certificated staff by end of September 2019. Staff complete self-assessment identifying personal focus areas for 2019-20 and 2020-21 and provide input on <u>CSD TSSS</u> matrix. Incorporate Year 1 skills into teaching practice 2019-20. 2.9.2 Revise CSD TSSS upon staff input. Evaluate staff self-assessment needs and create/publish supporting resources and provide follow-up training and/or job-embedded modeling. 2.9.3 Certificated staff complete end of year self-assessment of CSD TSSS skills taught and to refine focus areas for 2020-21 school year.
2020-21	2.9.4 Create and deliver training and resources to all certificated staff by end of September 2020. Staff update CSD TSSS self-assessment to refine personal focus areas for 2020-21 and 2021-22 and provide input on <u>CSD TSSS</u> matrix. Incorporate Year 2 skills into teaching practice 2020-21. 2.9.5 Revise CSD TSSS upon staff input. Evaluate staff self-assessment needs and create/publish supporting resources and provide follow-up training and/or job-embedded modeling. 2.9.6 Certificated staff complete end of year self-assessment of CSD TSSS skills taught and to refine focus areas for 2021-22 school year.
2021-22	2.9.7 Create and deliver training and resources to all certificated staff by end of September 2021. Staff update CSD TSSS self-assessment to refine personal focus areas for 2021-22 and provide input on <u>CSD TSSS</u> matrix. Incorporate Year 2 & beyond skills into teaching practice.

	2.9.8 Revise CSD TSSS upon staff input. Evaluate staff self-assessment needs and create/publish supporting resources and provide follow-up training and/or job-embedded modeling. 2.9.9 Certificated staff complete end of year self-assessment of CSD TSSS skills taught and to refine focus areas for 2021-22 school year.

TP Goal 2.10:
Provide a digital professional learning platform and online forum to share best practices and personalize "just in time" learning for all staff in order to foster development of digital literacy skills required to facilitate Next Generation learning (SP Goals 1, 2, 3 and LCAP Goals 1,2)

2019-20	2.10.1 Complete needs and feasibility analysis and evaluate potential products to pilot such as Alludo (web-based) or develop a professional learning platform internally. Make product recommendation. Professional learning platform is intended to provide teachers and staff with online access to professional development that can be personalized to individual needs. Platform should provide development and collaboration opportunities across schools and grade levels and incorporate content that is "crowd sourced" from staff and other districts. Examples of content to include: ● Making digital learning accessible for all students: resources & tools to address assistive technologies available for students all students, including students with special needs. ● Content to support teacher mastery of skills CSD TSSS, and by implementation year. (See Tech Plan Goal 1 above) ● Digital Citizenship ● Google Suite applications (possibly Google Certification) ● Provide basic troubleshooting assistance for different technology stacks: Chromebooks, Apple Products - iPads, MacBooks, Apps, networking, Web based learning tools 2.10.2 Work with district leadership and certificated and classified representatives to determine options to recognize and incentivize staff utilization of professional learning platform. 2.10.3 Create and Facilitate a process for teachers to evaluate and add content to professional learning platform.

TP Goal 2.11:
Build staff collaborative capacity and empower teachers to provide or facilitate professional learning opportunities at each school site that are personalized to teacher and site needs around integration of educational technology and innovation. (SP Goal 3, LCAP Goal 2)

2019-20	2.11.1 Complete a feasibility study, cost analysis and recommendation around establishing a Technology and Innovation Fellowship program to build capacity at each school site to provide personalized and "just in time" support by teachers who are trained as Technology and Innovation Mentors. Training will include cross-site collaboration and opportunities and/or incentive to attend external training and conferences: e.g. Ed Tech training/conferences such as CUE, ISTE, MERIT, Ed Surge, LEAD 3.

	2.11.2 Define role of site-based Technology & Innovation Mentors (TIMs), requirements, feasibility and make recommendation to create Site-based Technology & Innovation Mentors (TIMs). TIMs are full time teachers, but would get release time twice per month in order to provide demonstrations and support for integrating technology in the classroom. Additional Ed Tech training and development would be provided. Evaluate if there need for TIMs in addition to or in place of Site SysOps and/or an Ed Tech TOSA. Determine feasibility of TIMs to support fellow teachers at their site with just-in-time and/or job-embedded PD.. 2.11.3 Technology and Innovation Fellowship Benchmarks ● Year 1: 6-12 teachers (1 or 2 from each school site) will participate in the fellowship and commit to being site based Technology Integration Mentors (TIMs) for the 2020-21 school year. to integrate technology into the classroom, which includes Cambrian School District Summer Boot Camp (technology training), follow-up training 3-4 times per year. ● Year 2: 20-30 additional teachers will participate in Educational Technology Fellowship to integrate technology into the classroom, which includes Cambrian School District Summer Boot Camp (technology training), follow-up training 3-4 times per year. ● Year 3: 40-60 teachers will participate in Educational Technology Fellowship to integrate technology into the classroom, which includes Cambrian School District Summer Boot Camp (technology training), follow-up training 3-4 times per year. 2.11.4 Create process and provide teachers with personalized Ed Tech and Innovation learning plan tool based on self-assessment inventory focus areas of development, coaching, hands-on time to experiment and play with technology tools, expert(s) on-site or for each grade level, quick & easy self-assessment inventory for teachers to identify personal technology integration goals to help develop personalized learning plans. Establish process to identify, document and measure progress individualized professional development plans of Ed Tech & Innovation with input from key stakeholders. 2.11.5 Continue to offer choice during district-wide professional learning days to differentiate based upon areas of need. 2.11.6 Ed Tech team partner with Ed Services and Student Services Teams to embed technology PD into all other district wide PD. Set specific Edtech learning objectives based upon staff professional learning goals.
2020-21	2.11.7 Benchmarks for progress toward Professional Development Year 1: 60% of teachers will complete a professional development session focused on at least one application of technology learning. Year 2: 80% of teachers will complete a professional development session focused on at least one application of technology learning. Year 3: 100% of teachers will complete a professional development session focused on at least one application of technology learning.
2021-22	2.11.8 Activities for Classroom Integration Teachers facilitate one lesson per semester (ending December and June) that engages students in creativity.

	Teachers design one formative assessment per year (by June) in which students use digital tools to demonstrate their knowledge.
TP Goal 2.12: Provide teachers with digital monitoring tools to facilitate, guide, and manage student online work to ensure digital learning opportunities meet intended objectives and to foster development of digital responsibility and citizenship skills. (SP Goal 1,2, 3 and LCAP Goal 1,2)	
2019-20	2.12.1 Complete a needs analysis and product evaluation of a student device and account monitoring/management tool (E.g. Hapara, GoGuardian Teacher, Securly, Impero) that provides teacher ability to "drive" student chromebooks and iPads to push out links, quickly view and redirect off task behavior, limit access for students who need more guidance around digital responsibility. Recommend product(s) to pilot. 2.12.2 Create pilot success criteria for identified student device and account monitoring/management tool. Identify and train teachers and implement pilot. Ensure training includes support for students using assistive technologies. 2.12.3. Make recommendation on purchase and implementation of student device and account monitoring/management tool.
2020-21	2.12.4. Implement student device and account monitoring/management tool per recommendation in 2019-20.

Initiative 3:
Infrastructure, Hardware & Security

Summary of Vision:
Enabling Access and Safe, Effective Use of Technology

Reliability, safety, access, efficiency, and sustainability are essential to creating the infrastructure required to support the learning and teaching goals set forth in this Technology Plan. A solid foundation of hardware, staff and services must be provided. Additionally, a clearly delineated process to procure, manage, replenish, replace and/or dispose of equipment is critical to allow for adequate planning and budget allocations.

By leveraging technology and media resources, digital learning options are available for students at any time of day, from home, at school, and in the community. The value of anytime, anywhere learning is dependent on access and capacity for use; ubiquitous, robust internet access and the capacity to use digital learning tools and resources effectively. Digital learning enables students to productively use time during and beyond the school day, often redefining homework time.

Sufficient and responsive technical and instructional support, characterized by a positive service orientation, should be available (either virtually or in person) in every school. This support should be proactive, providing resources, coaching, and just-in-time instruction to prepare teachers and students to use new technologies, thereby reducing the need for interventions during the learning process.

Adequate bandwidth and a supportive infrastructure are in place to ensure ready and consistent access to online resources for teaching and learning. Teams monitor usage and identify possible bottlenecks prior to them affecting teaching and learning. Privacy, safety and security are primary concerns and prevention and response plans are in place. The school community collaboratively designs responsible use policies, and confirm that the network design is supportive of these policies.

Teams continuously monitor technologies—software, hardware, and infrastructure—to ensure upgrades, additions, and, when called for,

sunsetting/eliminations in a timely, cost-effective, environmentally responsible, and proactive manner.

Current State of Infrastructure, Hardware & Security

The Cambrian School District wide area network consists of six campuses and a district office, each with a multimode fiber-optic backbone and cat-5e/6 wiring to each data port. All sites are connected to the world wide web and to the data center located at the district office. All sites are connected to Santa Clara County Office of Education (SCCOE) via a 1 Gigabyte of bandwidth. Cambrian has site to site 10 gigabyte connection. By the end of March 2019, all sites are expected to have 10 gigabyte upload of Dark Fiber to SCCOE.

 There is an enterprise-level Wi-Fi Network installed at all campuses. We have internal switches (48 ports) that support 10 gigabyte connections internal and external, We have one wireless access point per four classrooms. Cambrian successfully switched over to VOiP telephone systems in 2017. Email was migrated over from Outlook to global access G suite Gmail in 2016. We have Blackboard website services for public facing district and school websites and mobile app as well as internal facing intranet site for staff. In addition, we utilize Blackboard mass notification tool for district and site wide communications (via email, text and phone) to parents and community members. Teacher websites are currently optional and teachers utilize either Blackboard or Google Sites for their class website.

Palo Alto Networks, including Wildfire filtering, are used for internet filtering of all district provided networks. We have internal DHCP servers for all sites. Virus scanning (Sophos) is in place as a preventative measure to protect against phishing, malware, ransomware, worms, etc.

All Cambrian district sites include network printer/copier servers for both color and black and white. We have a web based Help Desk ticket request/management system for technical support. All Staff and administrators have mobile account access to all computers throughout the district. All students have access to filtered, internet connected devices in classrooms and media centers. Students have access to district approved applications and filtered internet on district iPads, Chromebooks, Macbooks, and Mac and Windows based desktops. Each student is provided a G-Suite account with access to share/receive information only with accounts within the cambriansd.com domain.

Existing Technical Support Staff

- **Full Time:** 1 IT Director, 1 Ed Tech Director, 1 Data Coordinator, 2 Help Desk Network Technicians

- **Part Time:** .5 Ed Tech TOSA

- **School Computer System Operator (Sys Op):** Certificated staff who receive a stipend of $3,000 annually to provide technical support at his/her school as directed by the principal for an average of ten (10) hours outside of the instructional day.

Technology Infrastructure

The following Appendices Provide details around the current state of Cambrian's Technology infrastructure:

- [Appendix C: Existing and Recommended Student & Staff Device Inventory](#)

- [Appendix D: Existing Hardware & Infrastructure](#)

- [Appendix E: Existing Information & Data Systems](#)

- [Appendix F: Existing Other Centrally Managed Technological Services](#)

- [Appendix G: Existing Digital Curriculum, Apps, and Web Tools](#)

- [Appendix H: Cambrian School District Technology Skills Scope and Sequence](#)

Survey Data (Figure 16 and Figure 17): According to student, parent and staff survey responses on the BrightBytes in May 2018, access to internet enabled devices is exemplary. However, we need to ensure that the infrastructure and devices provided at school are maintained, replenished or replaced so that this level of access continues. Additionally, some students can not access the internet and/or do not have access to devices at home.

Figure 16 Internet Access
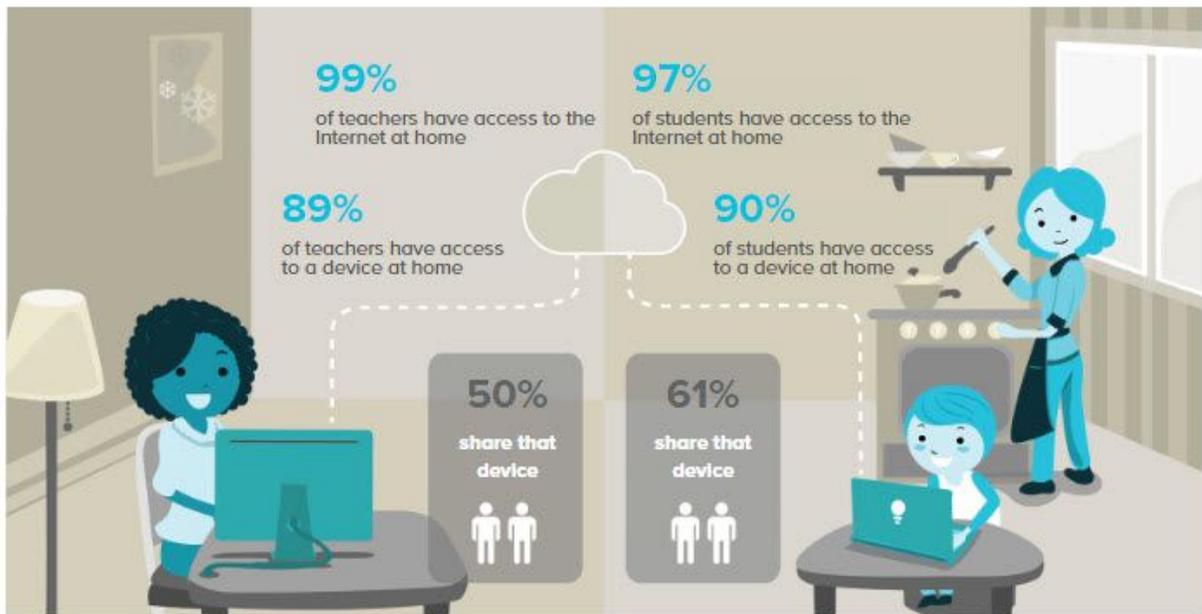
Figure 17
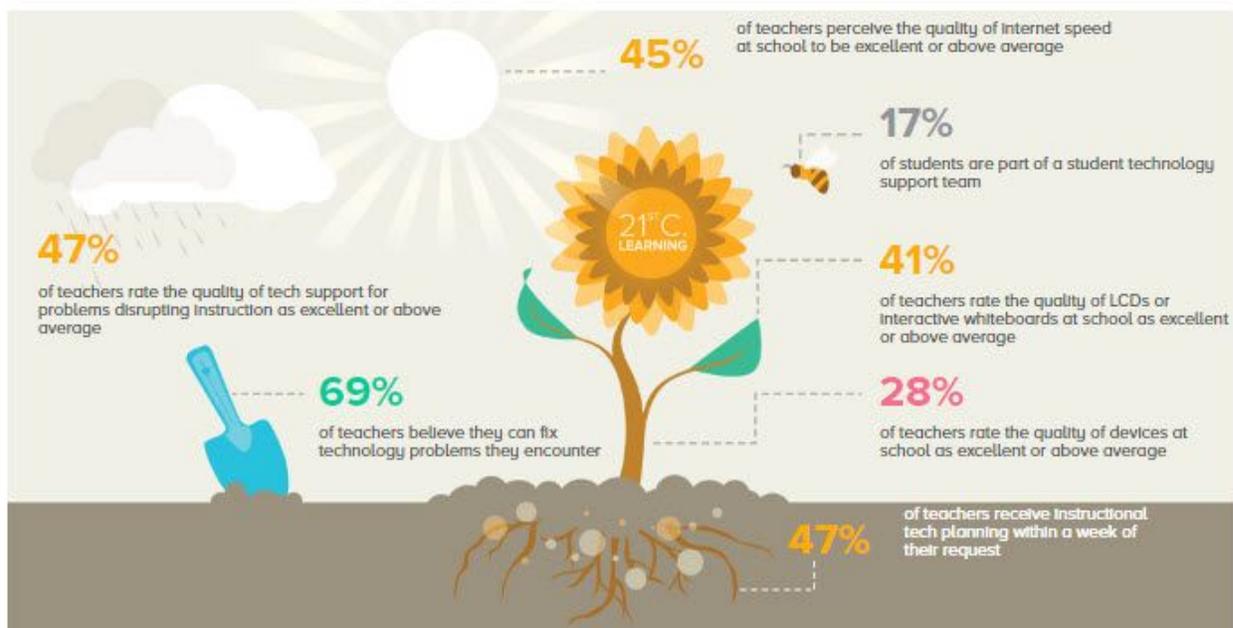
GOALS: Initiative 3 Infrastructure, Hardware & Security

To build upon and expand the current practices and achieve the vision of the Technology Plan, Strategic Plan and LCAP goals, the District should consider the goals described below.

Key: TP = Technology Plan   SP = Strategic Plan   LCAP = Local Control Accountability Plan

Initiative 3 Infrastructure, Hardware & Security	
TP Goal 3.13: Technology resources are ubiquitous in classrooms across the district and all students have access to developmentally appropriate devices to support learning objectives, achievement of academic standards, and mastery of the Next-generation competencies required for learning and success in our digital society. (SP Goals 1,2, 3 and LCAP Goal 1)	
When	**Objectives**
2019-20	3.13.1 Procure iPads and Chromebooks necessary to ensure current student to device ratios do not decline due to current devices reaching end of life (EOL). See Appendix D Existing Hardware & Infrastructure for current inventory and EOL dates.. • Attain or maintain minimum ratio of two students per one Chromebook grades 3-8 at all sites; one Chromebook per 3 students Grade 2 and SDC grades 3-5 • Maintain minimum ratio 1 iPad per 3 students grades PK-1; SDC grade PK-5 • Maintain minimum 5 iPads per elementary RSP teacher 3.13.2 Evaluate PreK-1 preferred device (iPad vs other tablets and/or Chromebooks) and make replacement recommendation for replacement of iPads reaching EOL in 2021 and beyond. 3.13.3 Evaluate need to continue to support and maintain non-Chromebook and iPad devices for students (e.g. MacBook Pro laptops, desktops...). Make recommendation.
2020-21	3.13.4 Procure Chromebooks to reach 1:1 student to device ratio in Grades 6-8 at all sites and reach or maintain ratio of 2 students per 1 Chromebook in grades 2-5 at all sites..
2021-22	3.13.5 and 3.13.6 Procure Chromebooks to replenish devices reaching end of life and to attain or maintain 1:1 student to device ratio in Grades 4-8. Evaluate and make recommendation on ideal student to device ratios in Gr PK-2.
TP Goal 3.14: Define and document an end to end process around requesting, procuring, receiving donations, inventory control and disposal of technology tools and	

	devices to help leverage potential funding sources and efficiently manage resources (SP Goal 3 & 5, LCAP Goal 2, 4)
2019-20	3.14.1 Identify & document: ● Procurement policy, process, and systems (include specs of devices that can and can not be supported) ● Inventory Management policy, process, and systems ● Device transfer/movement between classrooms policy/process ● Disposal and/or sale to 3rd party policy, process, and systems ● Donations policy, process, and systems (include specs of devices that can and can not be supported) 3.14.2 Communicate above processes to stakeholders (e.g. principals and teachers, Home and School Club, DonorsChoose…)
2020-21	3.14.3 Determine feasibility of procuring a single, centralized inventory control system/tool to eliminate the need for manual tracking/cross referencing from multiple systems

TP Goal 3.15:
Improve efficiency of remote support processes and mobile device management (MDM) software that allows IT administrators to run updates, secure devices, troubleshoot and enforce policies on computers, tablets, and laptops. (SP Goal 1, 2; LCAP 1, 3)

2019-20	3.15.1 Complete analysis and document needs based upon stakeholder input around MDM solutions. Research and make recommendations around strategy. ● District Mobile Device Management (MDM) support goal and scope: (i.e. what it covers: devices, apps, the scope of MDM: i.e. school/owned devices, contingent on device policy) ● Define current issues/capability about MDM/support and current + future device/support landscape (i.e. support effort, updates, security risk, resourcing) ● Desired state (e.g. improve efficiency of managing mobile devices, more security/less risk etc.) ● Recommendation: actions: investment, tools, training to meet current issues -- benefits/relative priority ● Roadmap Year 1 (2019-20), Year 2 (2020-21), and Year 3 (2021-22)
2020-21	3.15.2 Implement MDM solution recommendation

TP Goal 3.16:
Classroom standard technology equipment for teaching is met in all classrooms across the district (SP Goal 1, 2, 3 and LCAP Goal 1,2)

2019-20	2018-19 3.16.1 Define classroom standard technology for teaching in this plan and identify equipment that still needs to be replaced and/or provided, costs, and replenishment cycle.

	3.16.2 All teachers, site administrators and management staff with job-driven need for mobile computing received MacBook Pro laptop (4 year lease). Annual cost (4 year lease): approx $92,000 per year thru 2022/2023 2019-20 3.16.3 Procure additional Flat Panel displays (34-40 units), replacement failing document cameras (89 units) and screen casting (174 units) devices (e.g. Apple Tvs and/or Chromecast) in classrooms that are not at classroom standard. Estimated costs - Flat panel displays: $1,350 per unit; Doc Cam $550 per unit; Screencast: $250 per unit.
2020-21	3.16.4 Procure additional equipment needed to replenish classroom standard teaching technology as equipment breaks and/or reaches EOL. Estimated Costs TBD

TP Goal 3.17:
Ensure students and staff have access to the necessary internet connectivity required to meet learning objectives, state assessments, and Next-generation competencies. (SP Goal 2 & 3; LCAP Goal 1, 2)

2019-20	2018-19 3.17.1 Six servers replaced at District office in Oct 2018, Expected lifespan is 6 years. Replaced 10 physical servers with 1 virtualized server. 3.17.2 Continue to work with the Santa County Office of Education to enable Dark Fiber 10 gigabit hook-up to county in spring 2019 (all infrastructure already in place in Cambrian). No anticipated cost outside of existing staff time to test and verify uplink. 2019-20 3.17.3 Procure 45 wireless access points (spread across 6 school sites) which reached End of Life in July 2018 to ensure connectivity and response time does not fail or decline from current state. Estimated cost of $1,000 per unit. 3.17.4 Procure 45 Network Switches (spread across 6 school sites and District Office) to ensure internet access and response time does not fail or decline from current state. Estimated cost: $4,500-5,000 per unit. 3.17.5 Procure backup power for servers (APC). Currently 26 units reached EOL in 2016. Plan to replace 15-16 units with estimated cost of $3000 per unit.
2021-22	3.17.6 Procure an additional 155 wireless access points reaching End of Life in July 2021 (spread across District office and 6 school sites) to ensure connectivity and response time does not fail or decline from current state. Estimated cost $1,000 per unit;

TP Goal 3.18:
Provide the infrastructure and processes necessary to ensure safe and responsible technology use by staff and students and to protect data privacy and integrity.

2020-21	3.18.1 Complete bi-annual review, revision, approval and communication of Student and Staff Technology Use and Loaner Agreements and Media Release Agreements. 3.18.2 Implement cloud based web filtering and G-Suite auditing (e.g. Securly). Provides alerts on sound things as threats, self-harm, in-appropriate access on account activity/content. Extends to student G Suite account use at home. Provides visibility to parents, teachers and Tech Team on student account activity and enables personalized restrictions.
TP Goal 3.19: Continue to support and improve district-wide communication tools and website to meet the needs of our community (SP Goal 4 and LCAP Goal 3,4)	
2019-20	3.19.1 Provide additional staff training on producing website content that is accessible for all learners. 3.19.2 Document website, mobile app & notification sustaining support plan and evaluation/review cycle.

Summary of Infrastructure Recommendations

The following recommendations are in addition to infrastructure and devices already in place.

Table 1: *Student Device Recommendations Grades 2-8 Chromebooks*

Student to Chromebook Minimum Ratio Recommendations at All Sites				
Year	**Chromebooks**	**Per Students**	**Grade**	Notes
2019-20	1	2	3-8	If a site has more chromebooks than ratio recommendation, goal is to maintain current ratio
	1	3	2	
2020-21	1	1	6-8	
	1	2	3-5	
	1	3	2	
2021-22	1	1	3-8	
	1	2	2	

Table 2: *Student Device Recommendations Grades PK-1, Elementary RSP and SDC Grades PK-5*

Student to iPad Minimum Ratio Recommendations at All Sites				
Year	iPad	Per Students	Grade	Notes If a site/classroom has more iPads than ratio recommendation, goal is to maintain current ratio
2019-20	1	3	PK-1 and SDC Gr PK-5	
	5	Caseload	Per RSP TK-5	
	Re-evaluate device and appropriate ratio recommendations for PK-1; SDC PK-5; and RSP TK-5			

Table 3: *Classroom Standard Teaching Equipment*

A. **Laptop:** One 13-inch MacBook Pro 2.3 GHZ dual-core i5, 256BG 7th-Generation- Space Gray laptop with one charger (EOL 2023); One carrying case; One USB-C Digital AV Multiport Adapter

B. **70" Flat Panel Display**

C. **MiTel Phone:** Voice over Internet Protocol (VOIP) - 1 phone per classroom

D. **Document Camera:**   Avermedia POA9 (EOL 2016) - 1 per classroom.

E. **Casting:** Currently Apple TV: in most classrooms; Chromecast: only in some

   a. Recommend 1 casting tool to allow teachers and students to cast.

F. **Printer:** Access to Print to central Kyocera network copier/printers at each school site and around the district.

   a. Optional:

      i. Classroom Printers (HP, Dell) EOL 2014 - Plan recommendation is to consider not replacing due to cost and resources to support. Need to identify needs of teachers/students - do we need a few central printers for students to print to?

      ii. Windows PC or iMac Desktop: - only providing, replacing and supporting desktops donated to Cambrian School District meeting district standards (to be documented).

Recommendations to Attain and Maintain Classroom Standard Teaching Equipment in all Classroom				
Year	Item	Qty	Estimated Total Cost	Rationale/Notes
2019-20	Flat Panel Display	34-40	$50K	Remedy existing inequity in technology available for teaching at Sartorette, Bagby and Farnham
	Document Camera replacement	89	$48K	Reached EOL March 2016, many starting to fail
	Casting ability (e.g. Apple TV, Chromecast…)	174	$44K	Apple TVs will reach EOL June 2019.
	MacBook Pro laptops for staff	200	$95K	Year 1 of 4 Year Lease payment
2020-21	MacBook Pro laptops for staff	200	$95K	Year 2 of 4 Year Lease payment
2021-22	MacBook Pro laptops for staff	200	$95K	Year 1 of 4 Year Lease payment
2022-2023	MacBook Pro laptops for staff	200	$95K	Year 1 of 4 Year Lease payment

Table 4: *Other Hardware/Infrastructure Recommendations*

Recommendations to Update Aging Infrastructure/Hardware				
Year	Item	Qty	Estimated Total Cost	Rationale/Notes
2019-20	Replace District Servers at School Sites	6	$30-60K	Reached EOL July 2016. They are on 2012 OS. Can not upgrade to 2016 OS which is required for PowerSchool 12.1
	Replace backup power for servers	26	$45-78K	Reached EOL March 2015. Evaluating possibility of getting by with only 15 units instead of 26.
	Replace Wireless Access Points at school sites and DO	45	$45K	Reached EOL July 2018. Internet performance issues given demand
	Replace Network Switches	45	$202-225K	Reached EOL May 2017; evaluating feasibility of reducing number of switches
2020-21				
2021-22	Replace WiFi Access Points at school sites and DO	155	$155K	Reaching EOL July 2021
2022-23	Replace District Server at Steindorf	1	$5-10K	Reaching EOL July 2022

Table 5: District-wide Software and Tech Management Tools Recommendations

Recommendations on needed Software and Tech Management Tools				
Year	Item	Quantity	Estimated Total Cost	Rationale/Notes
2019-20	Online Learning Platform (e.g. Alludo, Canvas....)	Licenses for all staff	$4-6K	TP Goal 2.10:. Provide a digital professional learning platform and online forum to share best practices and personalize "just in time" learning for all staff in order to foster development of digital literacy skills required to facilitate Next Generation learning
	Digital Monitoring & class management tool (e.g. Hapara, GoGuardian Teacher...)	All student Chromebooks & iPads	$10-15K	TP Goal 2.12:. Provide teachers with digital monitoring tools to facilitate, guide, and manage student online work to ensure digital learning opportunities meet intended objectives and to foster development of digital responsibility and citizenship skills.
	Cloud -based web filtering & G Suite auditing (e.g. Securly)		$10-15K	TP Goal 18: Provide the infrastructure and processes necessary to ensure safe and responsible technology use by staff and students and to protect data privacy and integrity.
2020-21	Online Learning Platform)	Licenses for all staff	$2-4K	Annual fee - on-going
	Digital Monitoring & class management tool	All student Chromebooks & iPads	$10-15K	Annual fee - on-going
	Cloud -based web filtering & G Suite auditing (e.g. Securly)	All student G Suite accounts	$10-15K	Annual fee - on-going

Leadership

Creating a Culture and Conditions for Innovation and Change

While Leadership was not a specific intended focus area of the TTF, the process of creating the Technology Plan consistently brought to light the importance of our district leadership as a means to achieve all the goals of this plan. A Technology Plan is most effective when leadership and all staff are aligned to act with purposeful intent to implement the plan year after year. It would be necessary to include focussed instructional leadership support within the district LCAP.

Leadership Matters

- Principals and instructional leaders who invest in technology find themselves excited about its use and often focus on that rather than on creating authentic learning experiences. Principals must have a vision for teaching and learning and how technology can accelerate those experiences, not vice versa.

- Principals and instructional leaders who support teachers with the effective use of technology and empower them to create learning experiences in which technology can be used to explore, design, and create will see a maximized return on Instruction (ROI).

- Shifting the instructional pedagogy is no easy feat. Building the trust needed to do so and supporting teachers throughout the process are essential. Principals who model dynamic learning experiences help create that trust. A principal's and instructional leader's meetings and in-service time should be a direct reflection of the type of learning he or she is looking for in the classroom.

Technology leaders support their school and/or district's Future Ready Schools® (FRS) goals through their professional practice, programs, and spaces.

Derived from the FRS framework, the Future Ready Technology Leaders™ framework describes how technology leaders can support schools in their transition to digital learning and specific ways technology leaders can lead that transformation. By aligning their school and district strategic initiatives with the

Future Ready Technology Leaders™ framework, these innovative educators connect their practices, programs, and spaces to the innovative practices happening in schools today.

The principles outlined in the Future Ready Technology Leaders™ framework (Figure 18) acknowledge the various roles technology leaders serve within schools and districts and affirm a core belief that in a future ready school, all students deserve equitable access to qualified technology leaders, digital resources, and innovative learning environments.

Figure 18 Future Ready Technology Leaders™ framework

Cambrian School District BrightBytes May 19 Results (Figure 19). Marzano's research on effective schools reports that strong leadership is one of the top five school-level factors impacting academic outcomes for students.

Figure 19 Cambrian BrightBytes Survey on Leadership

Implementation Plan

Planning for sustainability and success with technology

Summary

The Technology Plan will be implemented in 3-year cycles with a projected outlook for a 5-year vision. The implementation plan addresses annual cycles of review, leadership teams, and process for reviewing, renewing and adjusting the goals.

Projected Budget

Table 6 below is not a commitment to fund the recommendations in this Technology Plan. The budget estimates are provided to help district leadership understand the potential total costs related to implementing the recommendations in order to make informed decisions about prioritizing this work along with other Cambrian School District Strategic Plan and LCAP priorities.

Table 6 Cambrian School District Projected Budget for Implementing Technology Plan

Cambrian School District Projected Budget for Implementing Technology Plan *Projected costs based upon February 2019 estimates				
Category/ Tech Plan Goal	**Description**	**2019-20***	**2020-21***	**2021-22***
Meet Classroom Standard Technology Equipment for Teaching	E.g. MacBook Pro Laptops, Flat Panel Display… • See Table 3: Classroom Standard Teaching Equipment • See Appendix D Existing Hardware & Infrastructure	$238K *2018-19: $95K (current lease payments)*	$95K	$95K
Maintain Current Infrastructure	E.g. Replace Wireless Access Hubs, Switches… • See Table 4: Other Hardware/Infrastructure Recommendations • See Appendix D Existing Hardware & Infrastructure	$322-$408K *2018-19: no budget*	$0	$155K
Student Devices: Meet minimum student to device ratios; Replacement & Replenishment of devices reaching end of life	Chromebooks & iPads • See Table 1: Student Device Recommendations Grades 2-8 Chromebooks • See Projected Costs of Chromebook Recommendations • See Appendix D Existing Hardware & Infrastructure	$242K (iPad replacement 400 units) $271-$362K (802 Chromebooks) *2018-19: $31K (current lease payments)*	iPad $10,00 (replace 20 iPads) $339-457K (1012 Chromebooks)	iPad TBD $223-299K (665 Chromebooks)

Cambrian School District Projected Budget for Implementing Technology Plan				
Category/ Tech Plan Goal	Description	2019-20	2020-21	2021-22
Tech Personnel	Existing Costs 1 FTE Director of IT 1 FTE Director of Ed Tech	No recommended budget	No recommended budget	No recommended budget increase

	2 Help Desk Technicians 1 Data Coordinator TBD: 1 Ed Tech TOSA TBD: Site SysOps (1 per site - Site Expense $3K per year) Recommendation ● Add 6 TIMs (1 per site - Full time Teacher w/ add'l stipend for Tech & Innovation Mentor responsibilities ● Eliminate 1 Ed Tech TOSA	increase 2018-19: $729K (current staff)	increase	
Professional Development	● TIMS Summer Fellowship (20K) ● In-Service PD ($25K) ● Release days for TIMS (up to 10 days per site) for site PD support ($10) ● External training opportunities for TIMS ($12K)	$72K 2018-19: $14K	$72K	$72K
District Supported Software & Mobile Device Management Licenses	Examples: PowerSchool, Illuminate, Imagine Learning, Blackboard…) ● See Table 5: District-wide Software and Tech Management Tools Recommendations ● See Appendix E Existing Information & Data Systems ● See Appendix F Existing Other Centrally Managed Technological Services	$298-308K 2018-19: $274K (existing subscriptions and contracts)	$298-308K	$298-308K

Opportunities to Increase Funding

- Technology Bond Measure
- State, County, and Local Business investments
- eRate
- Home and School Club

- Grants
- Cambrian Education Foundation
- Selling used devices (4th Gen iPads, MacBook Pros) to third-parties

Conclusions

    A. The Technology Plan is an ambitious project developed by the TTF and designed to be a guiding document for continual improvement in the District's ability to meet the needs of our students.

    B. The goals of the plan are organized around three major initiatives and tied to the LCAP and Strategic Plan.

    C. The three initiatives (1, 2, 3) are designed to create a learning environment for students where they can excel in our diverse global society for a future of academic or career success.

    D. The Technology Plan is about technology and how to effectively learn with it. The goals outline strategies for learning how to wisely use technology in specific learning contexts or for administrative systems.

    E. All Technology Plan goals and budget allocations will be considered and prioritized annually along with other Cambrian School District Strategic Plan and LCAP priorities.

    F. The implementation of the Technology Plan is imperative for CSD to prepare students for a future they will create with embedded technologies that we can't yet imagine.

Appendices

Appendix A:
Current Year (2018-19) Strategic Plan Outcomes that have potential implications for the Technology Plan

Desired Outcomes/Deliverables 2018-19
Strategic Plan Goal 1:   **NEXT GENERATION STUDENT:** We will provide rigorous, highly engaging learning opportunities that will prepare all students to be successful global learners, contributors and leaders.
1.1. Create, analyze and monitor student outcomes as it relates to Cambrian core competencies   1.1.a. Develop core competencies rubric   1.1.b. One capstone project for each school site
1.2. Provide a variety of opportunities that embody the core competencies   1.2.a. Awareness as to global contributor in society
1.3. Personalized learning opportunities for students that empower the self to achieve and tools to build confidence   1.3.a. Begin to personalize and provide student learning opportunities
1.4. Students have opportunities to demonstrate global contributions   1.4.a. Create opportunities for students to make global contributions
1.5. Expand integration of diversified experiential, project based learning (PBL) opportunities for students   1.5.a. Begin to expand across the District PBL opportunities for students to demonstrate learning
1.6. Digital Learning embedded into the instructional day for student learning   1.6.a. Begin to identify and integrate Computer Science Standards (K-8 grade)
Strategic Plan Goal 2.   **STUDENT LEARNING AND ACHIEVEMENT:** Every student will achieve. We will provide and support engaging, high quality instruction that promotes active learning and achievement for all students. Achievement gaps will be eliminated.
2.1. Staff will utilize and implement best instructional practices with fidelity to support every student in exceeding grade level proficiency in the state standards (LCAP Goal 1)

2.1.a. Tier 1 best practices implemented at all sites with fidelity across the district and by grade level.
2.1.b. Provide high quality extended learning opportunities for students to enrich and foster learning above and beyond level proficiency

2.2. Identify, develop, and use formative, interim, and summative assessments to measure students' performance and progress towards meeting or exceeding grade levels state standards (LCAP Goal 1)
2.2.a. Use of achievement teams amongst staff to evaluate student data and guide instruction (LCAP, 68)

2.3. Increase the proficiency in English Learners
2.3.a. All EL students will have access to Imagine Learning for language development (LCAP, 49)
2.3.b. Provide high quality extended learning opportunities for students
2.3.c. provide tools to students as needed to ensure outside of school day access for Imagine Learning

2.4. All school sites will implement Tier II interventions for struggling students needing additional services to meet grade level proficiency in state standards (LCAP Goal 1)
2.4.a. MTSS leadership team will develop a plan for MTSS framework at all schools
2.4.b. Continue to implement PBIS framework and Project Cornerstone (LCAP, 75)

2.5. Digital Learning embedded into the instructional day for student learning
2.5.a. Technology task force to develop 5 year Technology Plan
2.5.b. Ensure equal access for student tools across District

Strategic Plan Goal 3:
RESOURCES (Human and Capital): We will develop and utilize our fiscal resources and people to foster student achievement and the goals of the District.

3.1. Recruit and retain highly qualified staff (LCAP Goal 2)
3.1.a. Provide professional learning opportunities for staff based on need and interest for continuous improvement

3.2. Provide access to and mastery of 21st century learning next generation tools, resources and skills for staff and students with integration of instructional technology; professional development on integrating 21st century skills, tools and teaching strategies (LCAP Goal 2)
3.2.a. Complete an inventory of current resources
3.2.b. Create a technology infrastructure
3.2.c. Create process for app and technology request

Strategic Plan Goal 4:
EXTENDED LEARNING: We will develop and provide extended learning opportunities to foster achievement, intentional ways to close the achievement gap and increase all student success.

4.1. Enrichment and Extension Classes

4.2. Targeted After School Activities and Programs

Strategic Plan Goal 5:
CAMBRIAN CULTURE AND COMMUNITY: We will promote a welcoming, transparent and inclusive environment for all parents, families and community stakeholders as partners in the education and support of all students' success

5.1. Provide opportunities to increase student, staff, parents and community partners input in schools and districts events/activities, advisory committees and task force (LCAP Goal 4)
5.1.a. Intentional outreach inviting various stakeholders to participate on committees and task force to inform decisions (LCAP, 35)

5.2. Provide a variety of parent education/classes and district parent information events (LCAP Goal 4)

5.3. Provide opportunities to increase staff, parents and community partners' participation in schools and districts committees and task force (LCAP Goal 4)
5.3.a. Provide various options for interaction between staff, community and parents

5.4. Promote ongoing and open communication among all stakeholders that maintains a culture of respect, integrity, and inclusion (LCAP Goal 4)
5.4.a. Continue to enhance content with school/District websites, school communication tools, and provide highlights to topics
5.4.b. Ensure school newsletters are accessible for all

Appendix B:
Terms and Definitions

Term	Definition
ISTE	The International Society of Technology in Education standards are a framework for students, educators, administrators, coaches and computer science educators to rethink education and create innovative learning environments.
LCAP	The Local Control Accountability Plan describes our district's vision for students and annual goals.
MTSS	Multi-Tiered Systems of Support is an integrated, comprehensive framework that focuses on CCSS, core instruction, differentiated learning, student-centered learning, individualized student needs, and the alignment of systems necessary for all students' academic, behavioral, and social success.
EL	English Learner
TPACK	Technological Pedagogical Content Knowledge (TPACK) is a model representing the overlapping teacher "knowledge" circles required to effectively integrate technology in the classroom.
SAMR	Substitution, Augmentation, Modification, and Redefinition (SAMR) is a model designed to help educators infuse technology into teaching and learning.
SP	Cambrian School District Strategic Plan
NGSS	Next Generation Science Standards
ELA/ELD	English Language Arts/English Language Development
EOL	End of Life
SDC	Special Day Class
RSP	Resource Specialist Program
MDM	Mobile Device Management (remote device management software)

Appendix C
Existing and Recommended Student & Staff Device Inventory

- **Student Devices: Existing**
  - iPads:
    - TK - Grade 2 General Education: 1 iPad per 3 students
    - Pre-School - Grade 5 Special Day Classes: 1 iPad per 3 students.
    - RSP Gr TK-5: 5 iPads per RSP teacher.
  - iPad Recommendation: Transition Grade 2 to Chromebooks in 2019-20; Re-evaluate ratio and iPad vs more affordable options
  - Chromebooks
    - Grade 3-8 - Existing Device to Student ratio varies by site.
      - Bagby: 2.4 students per 1 Chromebook
      - Fammatre: 1.0 students per 1 Chromebook
      - Farnham: 1.9 students per 1 Chromebook
      - Sartorette: 2.4 students per 1 Chromebook
      - Steindorf: 1.0 students per 1 Chromebook (required ratio in gr 6-8 due to online curriculum)
      - Steindorf: 1.0 Students per 1 Chromebook
      - Price: 2.1 Students per 1 Chromebook

- **Chromebook Recommendation:**
  - 2019-20:
    - Grade 2 and SDC Gr 2-5: keep 4th Gen iPads, add one Chromebook per three students
    - RSP Gr TK-5: Keep 4th Gen iPads, add 5 Chromebooks per teacher
    - Grades 3-8: 1 Chromebook per 2 students grade 3-8 (keep current ratios if already better than this)
  - 2020-21:
    - Grade 6-8: 1 Chromebook per 1 student grades 6-8;
  - 2021-22:
    - Grade 3-5: 1 Chromebook per 1 Student
    - Grade 2: 1 Chromebook per 2 Students

Projected Costs of Chromebook Recommendations

Estimate Cost of to Achieve Chromebook Ratios & Replenishment Recommendation								
	Bagby	**Fammatre**	**Farnham**	**Price**	**Sartorette**	**Steindorf**	**Title III/ Take Home**	**Total**
2018-19 Chromebook Total Devices	119	270	151	477	93	361	31	1,502
2019-20 Est. Gr 2 Students	78	76	79	n/a	76	46	n/a	355
2019-20 Est. Gr 3-5 Students	226	267	239	n/a	209	153	n/a	1094
2019-20 Add 5 Chromebooks per RSP gr 3-5	5	5	5	n/a	5	5	n/a	25
2019-20 Est. Gr 6-8 Students	n/a	n/a	n/a	974	n/a	173	n/a	1147
2019-20 Total # of Chromebooks needed to attain Ratio recommend.	139	159	147	487	130	0	n/a	1062
2019-20 Total # of Additional Chromebooks needed to attain ratio recommend.	25	5	5	10	37	0	n/a	82
# Chromebooks EOY June 2019 (not usable after Dec 2019)	30	130	30	170	35	245	11	651
2019-20 Chromebooks Needed to attain or maintain ratio goals	55	135	35	180	72	245	n/a	722
2019-20 Low Est. Cost ($335 per unit)	$18,425	$45,225	$11,725	$60,300	$24,120	$82,075		$241,870
2019-20 High Est. Cost ($450 per unit)	$24,750	$60,750	$15,750	$81,000	$32,400	$110,250	n/a	$324,900

2020-21 # of additional Chromebooks need to attain Student:Device Ratio goals	0	0	0	487	0	0	n/a	487
# Chromebooks EOY June 2020	62	110	62	261	30	0		525
2020-21 # of Chromebooks Needed	62	110	62	748	30	0		1,012
2020-21 Low Est. Cost ($335 per unit)	$20,770	$36,850	$20,770	$250,580	$10,050	$0		$339,020
2020-21 High Est. Cost ($450 per unit)	$27,900	$49,500	$27,900	$336,600	$13,500	$0		$455,400
2021-22 Total Chromebooks at site	144	275	156	974	130	361		2040
2021-22 # of Chromebooks Needed	139	159	146	0	130	92		665
2021-22 Low Est. Cost ($335 per unit)	$46,565	$53,209	$48,854	$0	$43,494	$30,764		$222,887
2021-22 High Est. Cost ($450 per unit)	$62,550	$71,475	$65,625	$0	$58,425	$41,325		$299,400
Dec 2023 Chromebooks EOL	0	30	1	31	30	120		212
Assumptions: # of students based upon 2018-19 enrollment. Costs based upon Feb 2019 estimated costs.								

Appendix D
Existing Hardware & Infrastructure

Hardware	Vendor	Quantity	EOL Date/ Replacement Schedule*
VoIP Telephones	Mitel	400	2025 or beyond
District Servers at School Sites	?	7 6 are on 2012 server operating system and will keep working until dead. We can not upgrade them to 2016 OS, meaning we will start to lose some functionality as external tools are upgraded to 2016 servers. Older software will keep working, newer wont. E.g. can not even upgrade to PS 12.1 due to age of our servers	6 units: EOL July 2016 (Est. replacement cost $5,00-10,000 per unit). 1 unit: Steindorf EOL July 2022
District Office Servers	1 HP GEN 10 1 HP Gen 8	9 (2 at DO, 2 at Price, 1 at all other schools)	EOL: July 2023
District wide Networked Printer/ Copiers	Kyocera	17	New in 2018-19 EOL: TBD
Backup power for servers (APC)	Deco Tech (lowest current bid)	Bagby 2 DO 6 Farnham 2 Fammatre 2 Price 6 Sartorette 2 Steindorf 6	EOL: All 26 units are Past due -EOL was March 2015 Est. Replacement cost: $3,000 total per unit. Evaluating possibility of getting by with only 15-16 new unit at cost of est $3000 per unit
WiFi Access points ZF7363	Ruckus	All sites & DO	45 units: EOL was July 2018 Est. Cost $1,000 per unit
WiFi Access points R700	Ruckus	Bagby 23 DO 9 Farnham 18 Fammatre 18 Price 33 Sartorette 16 Steindorf 38	155 units: EOL July 2021
Network Switches	HP Aruba 2920 48G PoE+ Switch	Bagby 7 DO 5 Farnham 5 Fammatre 6 Price 10 Sartorette 5 Steindorf 7	45: past due May 2017 Est. cost $4500-5000 per unit. Currently analyzing the impact of reducing the # of switches when replacing units.

Classroom Flat Panel Display (70# is standard size_	CDW	Steindorf, Fammatre & Price in: All Classrooms (65# only at Fammatre) by end of 2018/2019. Farnham - 5 more Bagby 14-16 more Sartorette 15-20 more	Still need 34-40 more total for Farnham, Bagby, Sartorette. Est total cost $1350 per unit
Classroom Doc Cam. Avermedia POA9	Aver Media	All Sites	89 Units EOL March 2016 Est Cost $550
Apple Tv's	Apple	Approx. 200	Estimated 174 units will reach EOL at the end of 2019 school year. Estimated replacement cost per unit: $250
Student iPads Gen 4	Apple	510 across all 6 sites	510 units EOL Oct 2016 Est. Replacement cost $475per unit. Already unable to use some apps that are not compatible with Gen 4
Student iPads Gen 6	Apple	75 (65 at Sartorette; 10 at Bagby)	75 units EOL 2023
Students Chromebooks C720 & C720T	Acer	Bagby 30 DO 10 Farnham 30 Fammatre 130 Price 170 Sartorette 30 Steindorf 240	640 units EOL June 2019 Est. Cost to replace: Acer $13,500 for 30; HP $10,000 for 30 plus cart
Students Chromebooks C 740	Acer	Bagby 62 DO 0 Farnham 62 Fammatre 110 Price 261 Sartorette 30 Steindorf 0	525 Units EOL June 2020
Students Chromebooks C 732T & 731	Acer	Farnham 1 Fammatre 30 Price 31 Sartorette 30 Steindorf 120	212 - EOL Nov 2023
Student MacBook Pros	Apple	Approx 250 - all sites except Steindorf	250 units EOL 2017 Recommend not replacing - research feasibility of selling to 3rd party to office the cost of replacement iPads.. Except Price may still need some for specialized curriculum (e.g.Yearbook, Art)
Student MacBook laptops	Apple	Bagby - 19 Fammatre - 20 Farnham - 20 Sartorette - 20 Price 20	99 units - EOL 2017 Recommend not replacing

Windows Desktops	Donations	TBD	Donated but imaged and supported by CSD
iMac Desktops	Apple	TBD	Donated but imaged and supported by CSD
*Projected costs based upon Feb 2019 estimated costs.			

Appendix E
Existing Information & Data Systems

System	Purpose/Use	Access	Cost/Terms*
PowerSchool	Track all student and staff data; Grade PK-8 attendance; Grade 6-8 Gradebook and Grade Reporting	District, Site, management, administrators, teachers & specialists. Parent & Student Portal.	Annual cost approx. $35,000
Illuminate	Assessment Data Tracking & reporting; Online assessment administration; K-5 Report Cards	District, Site, management, administrators, teachers & specialists. Student assessment portal.	Annual cost approx. $22,000
California Longitudinal Pupil Achievement Data System (CALPADS)	Required State student data tracking system	District Access Only: Data Coordinator, IT Director, HR	No annual cost. Access required and provided by state.
CAASPP Systems: Test Operation Management System (TOMS); Test Administration & Reporting and Digital Library	Required State testing system (CAASPP, ELPAC) for formative and summative assessments and English Learner initial and summative assessments	Tech Team, Test Site Coordinators, Principals, Management Team, Teachers	No annual cost. Access required for all state for testing
SIRAS	Special education data for IEPs	Student Services, Special Ed	TBD
QSSS	Work orders	Required by county	Approx $60,000 annually
JAMF	Mobile device management (for staff mac pros)	IT Director and Help Desk Technicians	Est. $13,000 per year
SWIS	Behavioral data	Student Services, Special Ed Staff, Principals	TBD
A2A (attention to attendance)	Districtwide system to support students attending school	Student Services, Special Ed Staff, Principals	$22K
Imagine Learning	District wide	Tier 1, Tier 2 - ELA and Math	$83K
Follet Destiny	Price Middle School	Library inventory and check out system	Site Expense
Library World	All 4 elementary Schools and Steindorf K-8 STEAM School	Library inventory and check out system	Site Expense
*Projected costs based upon Feb 2019 estimated costs.			

Appendix F
Existing Other Centrally Managed Technological Services

Service	Purpose	Vendor	Est. Annual Cost/Term
Google for Education (email, G-Suite applications, Chromebook device management)	Productivity, communication, teaching & learning….	Google	No annual cost
District Website (including Ally accessibility tool), Notifications, and Mobile App	Communication, public interface/access to information, Emergency notifications, community outreach	Blackboard	$22K
Firewall/Spam & internet Filtering	Block inappropriate and/or harmful content	Palo Alto Network	Annual cost approx. $15,000
Inventory Tracking	Asset management and tracking	FATS, Google Admin Console, Meraki, JAMF, what else???	Total annual cost approx. $7,000
Online internal forms/workflow (e.g field trip request…)	Automate approval cycle an data tracking/flow for routine requests	Informed K-12	Annual cost approx
Virus/Malware	Protect district devices and systems from malware, spyware, ransom where	E.g. Sophos	Annual cost approx. $5,000
Mobile Device Management Systems -	Remote troubleshooting and push out of updates, links, apps…to student and staff devices (eliminates the need to touch every device)	Google, Meraki and JAMF	Annual cost approx. $12,000
Microsoft Suite licensing (Office, Active Directory, Servers…)	Productivity, teaching, device/account management		$14,600 annually
*Projected costs based upon Feb 2019 estimated costs.			

Appendix G
Existing Digital Curriculum, Apps and Web Tools As of December 2018

Vendor (Program)	Date of Status	Privacy Status	CSPA Status	Subject	Appropriate Grade
ABCya	3/14/2017	Not Approved	Declined		
Age of learning (abcmouse.com)	4/17/2017	Approved	Active	ELA; Math; Social Studies; Science; Health	PK; TK; K; 1; 2
Allen Learns About Feelings/The Allen Adventure	9/11/2018	No Student Data Used		Socio-emotional; Digital Citizenship	TK; K; 1; 2; 3
Artsonia.com	2/28/2017	Approved	Active	Art	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Autodesk	9/4/2018	Approved	Active	Tech	5; 6; 7; 8
Benchmark Education	8/8/2017	Approved		ELA	K; 1; 2; 3; 4; 5; 6
Board Maker	8/11/2017	Approved	Active	SPED	
Book Creator		Approved	Active	SPED; Tech; Writing; portfolios	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Bookshare	10/4/2017	Approved	District Vetted	SPED, ELA	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Brain Pop	3/3/2017	Approved	Active	ELA; Math; Social Studies; Science; Art; Music; Health; Engineering; Tech	K; 1; 2; 3; 4; 5; 6; 7; 8
Butterfly HD	9/11/2018	No Student Data Used		Science	2
Canvas	9/3/2018	Approved	Active	Classroom Management; Project Lead the Way	5, 6, 7, 8
Classdojo	2/27/2017	Approved	District Vetted	Classroom Management	K; 1; 2; 3; 4; 5
Clever Prototypes (Storyboard That)	3/1/2017	Approved	Active	Tech	5; 6; 7; 8

Common Sense Media		Approved	Active	Tech; Digital Citizenship	TK; K; 1; 2; 3; 4; 5; 6; 7; 8
code.org	5/22/2017	Approved		Tech	3; 4; 5; 6; 7; 8
College Preparatory Math (CPM)	4/11/2017	Approved	District Vetted	Math	6,7,8
CommonLit	5/10/2017	Approved	Active	ELA	3; 4; 5; 6; 7; 8
CueThink	4/11/2017	Approved	Active	Tech; Math	2; 3; 4; 5; 6; 7; 8
Dance Mat Typing	3/22/2017	No Student Data Used		Typing	2; 3; 4; 5; 6; 7; 8
Desmos	5/25/2017	Approved	District Vetted	Math	4; 5; 6; 7; 8
Doodle Buddy	8/20/2018	No Student Data Used			TK; K; 1; 2
easel.ly	3/27/2017	Approved	Active	Tech	5; 6; 7; 8
EdClub (Typing Club)	4/7/2017	Approved	Active	Typing	2; 3; 4; 5; 6; 7; 8
Edmodo (https://www.edmodo.com)	8/9/2017	Parent Permission Required		Tech	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
edPuzzle	8/9/2017	Approved	Active	Tech	4; 5; 6; 7; 8
embarc.online		No Student Data Used		Math	TK; K; 1; 2; 3; 4; 5
Endless Reader: The Ultimate Site Words	2/28/2018	Approved	Active	ELA	TK; K; 1
Epic!- Books For Kids(www.getepic.com)	10/25/2017	Not Approved	Declined		
ESGI	8/8/2017	Approved	Active	ELA; Math	TK; K
Flocabulary	4/11/2017	Approved	Active	ELA; Math	K; 1; 2; 3; 4; 5; 6; 7; 8
Front Row Math (Freckle)	2/27/2017	Approved	Active	ELA; Math	K; 1; 2; 3; 4; 5; 6; 7; 8
G Suite (Google Apps) for Education		Approved	Active	ELA; Math; Social Studies; Science; Art; Music; Health; Engineering; Tech; presentations	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Geoboard		No Student Data Used		Math	K; 1; 2; 3; 4; 5; 6; 7; 8

GeoGebra	3/8/2017	Approved	Active	Math	5; 6; 7; 8
greatminds.org (Eureka Digital Suite)		No Student Data Used	District Vetted	Math	TK; K; 1; 2; 3; 4; 5
Go Animate (School Version Only)	5/13/2017	Approved	District Vetted	Tech	5; 6; 7; 8
GoalBookApp.com	5/10/2017	Not Approved	Declined		
goFormative (free)	4/11/2017	Approved	District Vetted	Tech; assessment	5; 6; 7; 8
Gonoodle	3/22/2017	No Student Data Used		Classroom Management	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Google Apps for Education	8/28/2018	Approved		ELA; Math; Social Studies; Science; Art; Music; Health; Engineering; Tech; Classroom Management	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Google Classroom		Approved	District Vetted	ELA; Math; Social Studies; Science; Art; Music; Health; Engineering; Tech; Classroom Management	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Google Drive	8/28/2018	Approved		ELA; Math; Social Studies; Science; Art; Music; Health; Engineering; Tech; Classroom Management	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Google Translate	8/28/2018	No Student Data Used			PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Grammarly	3/10/2017	Not Approved	Declined		
Grandpa's Workshop		No Student Data Used		Math, SPED	PK; TK; K; 1; 2
Handwriting Without Tears		No Student Data Used	District Vetted	Handwriting; SPED	K; 1; 2
Happy Numbers	6/12/2018	Approved	Active	Math	PK; TK; K; 1; 2; 3; 4
Headsprout (Learning A-Z)		Approved	Active	Reading	K; 1; 2; 3; 4; 5
Hour of Code	5/22/2017	Approved	Active	Tech; coding	TK; K; 1; 2; 3; 4; 5; 6; 7; 8

Imagine Learning		Approved	Active	EL; ELA	TK; K; 1; 2; 3; 4; 5
Kahoot	4/11/2017	Approved		Tech	5; 6; 7; 8
Khan Academy	3/22/2017	Approved	Active	Math	K; 1; 2; 3; 4; 5; 6; 7; 8
Kidblog	7/24/2017	Approved	Active	Writing, Tech	K; 1; 2; 3; 4; 5; 6; 7; 8
Kodable	12/4/2018	Approved	Active	tech	K; 1; 2; 3; 4; 5
KQED Art School	3/1/2017	No Student Data Used		Art	5; 6; 7; 8
legends of learning	6/7/2017	Approved	Active	Science	3; 4; 5; 6; 7; 8
Lego WeDO Lego Education		Approved	Active	Science, math, tech	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
levarburtonkids.com	8/25/2017	Pending Final Approval		ELA	TK; K; 1; 2; 3
Literably		Approved	District Vetted	ELA	TK; K; 1; 2; 3; 4; 5
Mathplayground.com	2/28/2017	No Student Data Used		Math	1; 2; 3; 4; 5; 6
n2y (Unique Learning Systems)	8/18/2017	Approved	Active	SPED	
National Geographic	8/9/2017	Pending Final Approval		ELA, Social Studies	6; 7; 8
Native Brain	8/20/2018	Not Approved	Declined		
Nearpod	4/11/2017	Approved	Active	tech	K; 1; 2; 3; 4; 5; 6; 7; 8
NewsELA	2/27/2017	Approved	Active	ELA; science; math; social studies	2; 3; 4; 5; 6; 7; 8
NoRedInk	9/11/2018	Approved	Active	ELA	6; 7; 8
Number Frames		No Student Data Used		Math	TK; K; 1; 2; 3; 4; 5
Odysseyware		Approved	District Vetted	blended learning; SEL	6; 7; 8
pbskids.com	9/5/2017	No Student Data Used	District Vetted	ELA; science; math; music; social emotional	TK; K; 1; 2;

Pear Deck	3/14/2017	Approved	Active	tech; assessment	4; 5; 6; 7; 8
Penpal Schools	8/8/2017	Approved	Active	ELA; writing; social studies	4; 5; 6; 7; 8
Pieces Basic		No Student Data Used		Math	K; 1; 2; 3; 4; 5
piktochart.com	4/11/2017	Approved	Active	tech; infographics	5; 6; 7; 8
Popplet		Approved	Active	tech; infographics; graphic organizer; mind map	1; 2; 3; 4; 5; 6; 7; 8
Prezi	2/27/2017	Not Approved	Declined		
Prodigy	2/27/2017	Approved	District Vetted	math	1; 2; 3; 4; 5; 6; 7; 8
Project Lead the Way	3/27/2017	Approved	Active	tech; computer science	5; 6; 7; 8
QR Code Reader	8/28/2018	No Student Data Used		tech	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
quill.org	8/8/2017	Pending Final Approval		Writing	3; 4; 5; 6; 7; 8
Quizizz	8/9/2017	Pending Final Approval		tech; assessment	3; 4; 5; 6; 7; 8
RAZ Kids (Learning A-Z)	3/14/2017	Approved	Active	ELA	K; 1; 2; 3; 4; 5; 6
Read Naturally	9/18/2018	Approved	Active	reading, EL, SPED, ELA	
Reading Eggs		Approved	Active	Reading; EL	PK; TK; 1; 2
Reading Raven			New Request	Reading	TK; K; 1
Reflex Math	2/27/2017	Approved	Active	Math; math facts	K; 1; 2; 3; 4; 5
Remind.com	8/9/2017	Not Approved	Declined		
Renaissance Learning (Accelerated Reader/STAR)	6/19/2017	Approved	Active	ELA	1; 2; 3; 4; 5
Rosetta Stone	8/16/2017	Approved	Active	EL	

Scratch	8/11/2017	Approved		tech; computer science; coding	4; 5; 6; 7; 8
Scootpad		Approved		ELA; math	K; 1; 2; 3; 4; 5; 6; 7; 8
Seesaw	3/10/2017	Approved	Active	tech; portfolios	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
ShowMe Interactive Whiteboard	8/28/2018	Approved	Active	ELA; Math; Social Studies; Science; Art; Music; Health; Engineering; Tech;	PK; TK; K; 1; 2; 3; 4; 5; 6; 7; 8
Smart Music	3/22/2017	Pending Final Approval		music	3; 4; 5; 6; 7; 8
Socrative	11/13/2018	Approved	Active	tech; assessment	2; 3; 4; 5; 6; 7; 8
Sown to Grow	3/14/2017	Approved	Active	tech; goal setting	2; 3; 4; 5; 6; 7; 8
spelling city	8/9/2017	Approved		spelling	2; 3; 4; 5
spelling stars	9/1/2017	Pending Final Approval		spelling	2; 3; 4; 5
Splash Math		Approved	Active	math	K; 1; 2; 3; 4; 5
Stack the States		No Student Data Used	District Vetted	geography	5
Starfall	3/8/2017	Approved	Active	ELA; math; music	TK; K; 1
storybird	5/11/2017	Pending Final Approval		writing	2; 3; 4; 5
Storyjumper.com	8/9/2017	Pending Final Approval		writing	2; 3; 4; 5
Studies Weekly https://www.studiesweekly.com/privacy/	10/9/2017	Approved	Active	social studies; ELA	K; 1; 2; 3; 4; 5; 6; 7; 8
Subitize Tree		No Student Data Used		Math	K; 1; 2
Sumdog.com	5/3/2017	Approved	Active	Math; ELA	K; 1; 2; 3; 4; 5; 6; 7; 8
Sushi Monster		Approved	Active	Math facts	2; 3; 4
Sutori.com (Hstry)	3/14/2017	Approved	Active	tech; presentation	3; 4; 5; 6; 7; 8
Symbaloo	3/10/2017	Not Approved	Declined		

TanZen		Approved	Active	Math	K; 1; 2
TCI		Approved	District Vetted	social studies	6; 7; 8
Teaching.com (EduTyping.com)	8/9/2017	Approved	Active	typing	K; 1; 2; 3; 4; 5; 6; 7; 8
Teaching.com (typing.com)	8/9/2017	Approved	Active	typing	K; 1; 2; 3; 4; 5; 6; 7; 8
TES Teach	8/9/2017	Pending Final Approval		tech; lesson planning	K; 1; 2; 3; 4; 5; 6; 7; 8
Texthelp (Fluency Tutor/Read & Write)	8/3/2017	Approved	Active	sped; ela	2; 3; 4; 5; 6; 7; 8
Thinglink (https://www.thinglink.com/)	10/5/2017	Pending Final Approval		tech; presentation	3; 4; 5; 6; 7; 8
Time Magazine for Kids	3/22/2017	Pending Final Approval		ELA	K; 1; 2; 3; 4; 5; 6
timemapper (open knowledge)	3/20/2017	Pending Final Approval		social studies	6; 7; 8
Tinkercad (Autodesk)	10/5/2017	Approved	Active	Design; tech	5; 6; 7; 8
Touch and Write		No Student Data Used		letters; phonics	TK; K; 1
tynker.com	8/8/2017	Approved		tech; computer science; coding	4; 5; 6; 7; 8
typing.com	9/19/2018	Approved	Active	typing	K; 1; 2; 3; 4; 5; 6; 7; 8
typingtraining.com	8/8/2017	Approved	Active	typing	K; 1; 2; 3; 4; 5; 6; 7; 8
Vocabulary.com	3/10/2017	Approved	Active	vocabulary	5; 6; 7; 8
Weebly	11/1/2017	Not Approved	Declined		
wevideo (free public version)	3/16/2017	Not Approved	Declined		
wevideo (paid education version)	3/16/2017	Approved	Active	video; tech	5; 6; 7; 8
wix.com	11/2/2017	Not Approved	Declined		

Wizer.Me (http://app.wizer.me/)	8/8/2017	Pending Final Approval		assessment	3; 4; 5; 6; 7; 8
Writing Wizard		Approved	District Vetted	writing; letter formation	PK; TK; K; 1
Wonder for Dash and Dot Robots		Approved	Active	tech; coding	K; 1; 2; 3; 4; 5; 6; 7; 8
Xtra Math		Approved	Active	math; math facts	K; 1; 2; 3; 4; 5
YouTube	8/28/2018	No Student Data Used		tech	
Zearn (paid version)	8/10/2017	Approved	Active	math	K; 1; 2; 3; 4; 5

Appendix H
CSD Technology Skills Scope and Sequence

[DRAFT 2.3.19 CSD Technology Skills Scope and Sequence](#)