Technology Master Plan

Oak Park Unified School District

July 1, 2016 - June 30, 2019

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Adopted by OPUSD Governing Board on April 19, 2016

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SECTION 1. PLAN BACKGROUND

1a. Duration and District Demographics

This three year district technology master plan takes effect July 1, 2016 and extends through June 30, 2019. It is a living document subject to modification and adjustments as realities evolve and new information, experience, resources, and circumstances unfold throughout time.

Oak Park Unified School District (OPUSD) is a high performing public school district nestled in the scenic hillsides of the southeast corner of Ventura County adjacent to Los Angeles County. The entire community is approximately 2.5 miles square. It is a relatively affluent area with a median household income of $140,000. In 1977, the community petitioned and received permission from the State Board of Education to create its own school district.

OPUSD currently serves approximately 4600 students in grades K-12. The District supports a collaborative style of leadership and promotes the involvement of staff, parents and students in the educational process. The administrative, teaching and classified staff are highly committed and well trained in the current research and practice of teaching and learning. The Oak Park Unified School District operates eight schools:

Elementary Schools		
Site	Enrollment Oct 2015	
Brookside Elementary School (BES)	601	Grades K-5
Oak Hills Elementary School (OHES)	532	Grades K-5
Red Oak Elementary School (ROES)	595	Grades K-5
Middle School		
Site	Enrollment Oct 2015	
Medea Creek Middle School (MCMS)	1104	Grades 6-8
High Schools		
Site	Enrollment Oct 2015	
Oak Park High School (OPHS)	1542	Comprehensive high school- Gr. 9-12
Oak View High School (OVHS)	38	Continuation high school- Gr. 10-12

Other		
Site	Enrollment Oct 2015	
Oak Park Independent School (OPIS)	222	K-12- Independent Study School
Oak Park Neighborhood School (OPNS) (affiliated with OPUSD)	55	Pre-K Reggio Emilia based Preschool

All of our schools have received multiple state and national recognitions including National Blue Ribbon Schools (Academic Excellence), National Green Ribbon Schools (Reduced environmental impact, health and wellness, environmental education), California Gold Ribbon Schools, California Distinguished School, Newsweek Top 100, Golden Bell Honoree and Standard and Poor's top 29 Outperforming Districts, to name a few. Excellence is our norm, as evidenced by our 2013 district API score of 927, which made OPUSD the 7th highest ranking comprehensive public K-12 school district in the state of California in the last year that API scores were published. As a District of Choice (DOC), our excellent program draws inter-district transfer students from surrounding districts. Approximately 40% of the district's students come to us through the District of Choice program.

We believe that the reason for our success is due to the fact that we, as an organization, have made a commitment to our students to meet their academic needs every day and to provide an appropriate level of learning through challenge, depth, complexity and novelty. Our teachers' high degree of attention to providing our students with an engaging, differentiated and meaningful curriculum is at the core of our vision.

District Motto: *Educating Compassionate and Creative Global Citizens*

OPUSD Mission Statement

The mission of Oak Park Unified School District is to provide students with a strong foundation for learning which meets the challenge of the present and of the future through a balanced education which includes academic achievement, personal growth, and social responsibility.

The district website is located at: www.opusd.org

The Oak Park Unified School District governing board has established the following Moral Imperatives which guide all of the activities of the district:

- Learning opportunities should be as authentic as possible and personally meaningful. Students need to explore, create and discover.
- All students should be encouraged to become independent lifelong learners, thinkers, and producers and stay true to themselves.

- All students should receive instruction that is differentiated. Learning experiences should emphasize depth, complexity, and novelty.
- Technology is one of the tools to enhance the learning experience and should become an internalized method of learning and expression, but should not be emphasized to the exclusion of cursive handwriting, reading books, painting, drawing, and constructing with authentic materials.

District's Strategic Plan for Educational Technology

The mission of the Oak Park Unified School District is rooted in the belief that all students should receive an educational experience that is differentiated, engaging and innovative. This moral imperative has been one of the guiding influences that has shaped the district's emphasis on providing the appropriate tools in the classroom to prepare students for the world and workplace they will soon be entering. Computer technology has advanced rapidly since the invention of the personal computer democratized access to information processing. Computing has quickly grown beyond data storage and retrieval to being an indispensable utility for providing ubiquitous access to information and analysis, an enabler for concurrent collaboration, and a platform for creativity and expression of ideas.

Through technology, students graduate beyond being consumers of information, to becoming producers of meaning and architects of change to a worldwide audience.

Since the passage of Measure C6 ($17 million) in 2006 for technology, and Measure R ($29.5 million) in 2008 for school facilities improvement, the district has invested heavily in ensuring that teachers and students had access to the appropriate technology tools and infrastructure to allow innovative and engaging learning that utilized the strengths of emerging computing tools.

Technology transforms teaching and learning in three phases:

Phase 1: Teachers present lessons using technology
Phase 2: Students visit with technology
Phase 3: Students use technology daily as an indispensable tool for access, practice, collaboration, and creation.

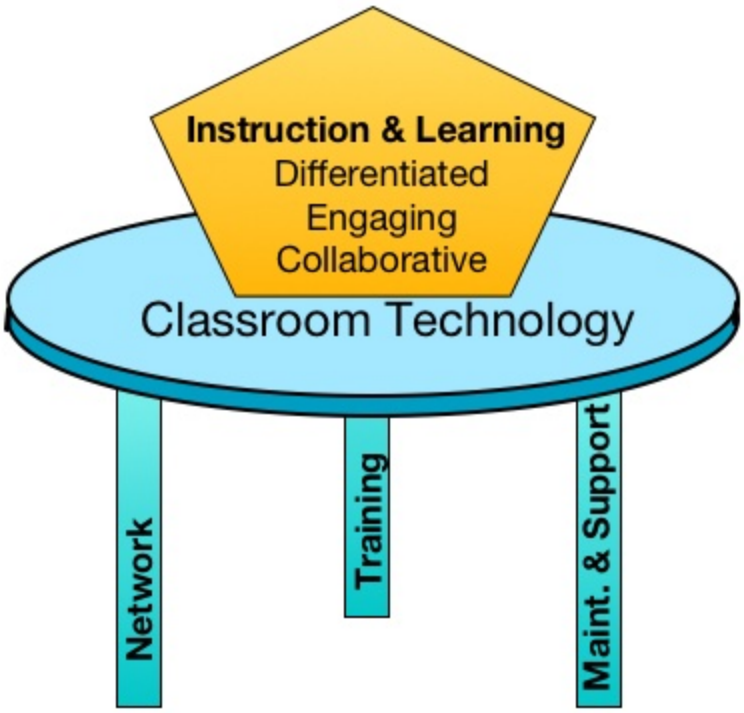
The 21st Century Classroom initiative which C6 funded in large part provided teachers with a laptop, an interactive whiteboard, document camera, and student responders, along with a first generation network infrastructure that allowed the district's computers to be networked and files to be stored and backed up on file servers. Computer labs were built at each school and mobile carts of laptops (Computers On Wheels – COWs) were also provisioned through C6. This allowed the district to progress through Phase 1 and Phase 2 transformations of teaching and learning.

The popularization of the smartphone and the invention of the first commercially successful tablet computer in 2010 (the iPad) signaled a major shift in how society interacted with computing technology. For the first time, mobile devices made computing truly personal, and ubiquitous access to the Internet started to dramatically shift the landscape of business and culture. By 2013, technologists proclaimed that society had entered a post-PC world. The mobile computing revolution has changed the balance of power and altered the calculus of what it takes to become successful in a the new collaboration stoked economy.

Beginning in 2013, the district began a pivot to address this reality and embarked on a multi-year plan to rebuild its network and infrastructure to support a learning environment built upon the platform of mobile computing with the goal of shifting more of the locus of control and experience of technology into the hands of students. This would allow the district to advance into Phase 3 where computing technology became so ingrained into the fabric of learning that it faded into the background as a tool no more special than a pencil, binder, or textbook. The ultimate goal is to build toward a 1-to-1 computer to student learning environment where every student has access to their own computing device every day and it becomes the conduit toward differentiation, engagement and collaboration.

Classroom technology by itself has never been the ultimate goal nor destination for the district. Rather, classroom technology can be an effective platform upon which instruction and learning can be differentiated (each student receiving what they need to master the curriculum unique to their own learning styles and modalities), engaging (software that is well designed and draws each student into an interactive, adaptive learning situation with the chance for individualized remediation), and collaborative (multiple students working together to accomplish a learning goal or to produce a group product), and is able to draw the student into an active role in their daily experience. Such a learning platform can only be stable and sustainable if it is built upon a solid foundation of three pillars :

1) a robust network infrastructure
2) sufficient personnel resources devoted to staff training on effective use of the technology tools
3) the proper level of resources applied to system maintenance and support.



Measure C6 and (to a lesser extent) Measure R have been the vehicles the district has used to fund certain parts of the classroom technology, more specifically the network infrastructure and many of the end user devices used for instruction and learning in the classroom.

As of spring 2016, the district is in the process of preparing to pursue a new bond offering to continue funding and supporting the technology initiatives outlined in this district master plan for technology. The underlying theme to this strategy is to ensure a robust infrastructure (in networking, training, and support) that will enable students to learn in a mobile computing device rich environment. Ultimately, the district is moving toward a 1-to-1 mobile computing device model of deployment.

1b. Stakeholders

District Technology Committee members (through monthly meetings):

Martin Klauss, Assistant Superintendent of Business Services
Enoch Kwok, Director of Educational Technology and Information Services
Erik Warren, Elementary School Principal
Heather Sloan, Instructional Technology Specialist
Keenan Kibrick, Instructional Technology Specialist
Susan Allen, High School teacher
Erik Amerikaner, High School teacher
Barbara Wechter, Middle School teacher
KC Kelem, High school teacher
Gui Andrade, Student representative
Lori Getz, Parent volunteer
Drew Hazelton, Governing Board member

The Parent Technology Survey (January 2016) was administered to gauge the level of technology students had at home and parent's interest in district technology Bring Your Own Device program or Lease To Own program. 727 families responded to the survey. There was increasing support for a district 1-to-1 mobile computing program (either through BYOD or LTO) as the grades increased:

Lower Elementary: 70.7% support
Upper Elementary: 77.5%
Middle School: 85.9%
High School : 90.3%

The Teacher Technology Survey is administered every spring and allows the district to measure and track changes in teacher's use of technology, needs for support, training, and staff development, and their attitudes toward ongoing technology initiatives and future allocation of technology resources. See Appendix C for a summary of survey results.

1c. Research

Early studies related to teacher use of technology in the classroom often showed a gap between their desire to implement and actual implementation. Researchers found a combination of both internal and external barriers that prevented teachers from using technology including uncertainty, lack of skill or knowledge, lacking curriculum, access, and support.

As Oak Park Unified School District has acquired the appropriate hardware, curriculum, and support, it is necessary to look at what barriers may still be influencing teacher use of technology in the classroom. In 2012, a small study conducted by Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, and Sendurur, looked at twelve K-12 classroom teachers (all noted for their exceptional work with technology integration). The study focused on teachers' classroom practices and their pedagogical beliefs.

Results suggest close alignment; teachers who believe in a more student-centered approach created more opportunities for students to use inquiry-based and project-based learning methods regardless of curricular, technological, or even administrative barriers.

The teachers' own attitudes about the pertinence of technology to students' learning were perceived as having the biggest impact on their success. Additionally, most teachers indicated that internal factors (e.g., passion for technology, having a problem-solving mentality) and support from others (administrators and personal learning networks) played key roles in shaping their practices.

Teachers noted that the strongest barriers preventing other teachers from using technology were their existing attitudes and beliefs toward technology, as well as their current levels of knowledge and skills.

The study recommended professional development focused on strategies for facilitating changes in teachers' attitudes and beliefs about technology.

Dr. Jayme Johnson of Village School in Los Angeles, CA, (2016) discovered similar finding and began investigating creating professional development that would change perception thus increasing willingness to integrate more technology in the classroom. She too believes that teachers must "buy-in" in order to actively use technology in an organic way in the classroom. Dr. Johnson's finding revealed that teachers' professional development experiences: (a) were shaped by their school culture; (b) expanded their expertise and bolstered their confidence in and comfort with implementing technology infused curricula; and (c) reinforced the importance of classroom integration of technology. The findings provide suggestions for future models of technology-related professional development, specifically that professional development should

(a) be supported, (b) be aligned with the school's culture and mission, (c) expand teachers' expertise, and (d) have a meaningful impact upon the curriculum.

Most recently, OPUSD's Technology TOSA, Heather Sloan, conducted a year-long informal study bringing one representative from each elementary grade level at each site to investigate the use of technology in the classroom as it pertains to direct instruction, inquiry-based learning, project-based learning, and STEM. Keeping school culture, support, alignment with moral imperatives and the need to meaningfully connect technology and the curriculum, the participants attended four sessions between August and May for seven hours per session.

Teachers worked together with other grade-level colleagues to create curriculum maps incorporating the CTI methodology (see below) and technology integration. From these sessions, the K-5 Technology Standard document was devised and important conversations took place about future professional development in order to bring the entire grade-level team on-board. Based on the finding as each teacher implemented and evaluated the integration process several important factors must be considered:

Teachers require time for curricula development
If each lead teacher at his/her own site is responsible for bringing the PD to the team, there must be time set aside beyond the 1 1/2 hours (3 times/month) for lesson planning and logistics.

More synergy between Computer Lab and Classroom
Currently, the computer lab curricula run independently from the core classroom. Certain skills being taught in the lab are not taught BEFORE they are needed in the classroom. Much of the trouble revolves around planning time and not personnel issues.

More access to a mixed technology environment
Teachers expressed appreciation for the classroom sets of devices however they are finding the need for a mixed environment of Chromebooks and iPads (1:1 Chromebooks with a set of accessible iPads for the grade level in Grades 4/5)

Critical Thinking in 21st Century Classrooms

The new California Standards emphasize critical thinking skills, and call upon teachers to explicitly teach the 21st century skills that will be essential for our students to be college and career ready. The old (1997) standards led many educators to try to cover a laundry list of content that could be easily taught with traditional textbooks, and assessed with paper and pencil multiple choice tests. In a world with virtually ubiquitous access to content, the memorization of factoids is not all that useful. More importantly, this method of teaching is not sufficient to prepare our students to be successful in careers that do not yet exist. Today, the focus needs to be on producing creative, lifelong learners.

District Moral Imperatives and current research on how students learn, support a more holistic, project-based, and experiential approach to teaching. Across the Oak Park District, our teachers are continuously seeking the most effective instructional strategies. A prime example of this is Inquiry-Based Instruction. Inquiry is a process in which students initially participate in an experience that is specifically designed to leave them with more questions than answers. Students then construct meaning through deeper exploration of these questions through a series of carefully designed activities. Finally, students demonstrate and share their learning in authentic ways. This is becoming a regular method of instruction, rather than a rare event. Our District provides extensive training for teachers in Inquiry-Based Instruction, including the Critical Thinking Institute (CTI), a partnership between OPUSD and UCLA. Teachers volunteer to become part of a cohort of learners who meet regularly throughout the year outside of the classroom to participate in in depth training and practice with inquiry based instruction techniques and best practices. The district has teachers involved in first, second and even third year cohorts as they progress toward becoming trainers of the CTI model themselves.

Technology plays a key role in supporting inquiry model of learning. At the beginning of the inquiry process, technological resources can be used to create the initial experience and document student-generated questions. As students explore and research their questions more deeply, access to Internet resources is essential. This type of learning requires high levels of collaboration. Our students and teachers require access to technology that supports collaboration that is both synchronous and asynchronous. A combination of wireless networking, mobile/portable devices (including iPads, Chromebooks, laptops), and applications such as Google Docs and Google Classroom allow for this to occur. Finally, students present, publish, or otherwise share their learning using a variety of technology tools.

SECTION 2. CURRICULUM COMPONENT

2a. Teachers Access to Technology Tools.

Teachers are asked every spring to respond to a district-wide technology survey. The last survey from spring 2015 revealed that of those who answered, 75% feel they are cutting-edge users or use the technology regularly with confidence. See **Appendix C** for survey result details.

Proficiency with Technology:

11. Proficiency

	1 - No knowledge	2 - Novice - beginner	3 - Intermediate - use confidently	4 - Expert (can train others)	Response Total
SMARTboards	5.68% (5)	12.5% (11)	59.09% (52)	22.73% (20)	88
Document Cameras	15.91% (14)	25% (22)	45.45% (40)	13.64% (12)	88
Student Responders/Clickers	36.36% (32)	34.09% (30)	17.05% (15)	12.5% (11)	88
Computers On Wheels COWs	19.32% (17)	19.32% (17)	34.09% (30)	27.27% (24)	88
iPads	6.82% (6)	29.55% (26)	51.14% (45)	12.5% (11)	88
Chromebooks	31.82% (28)	32.95% (29)	23.86% (21)	11.36% (10)	88
Google Docs/Google Drive	17.05% (15)	40.91% (36)	31.82% (28)	10.23% (9)	88
Google Classroom	50% (44)	32.95% (29)	13.64% (12)	3.41% (3)	88
Khan Academy - CC Math	54.55% (48)	32.95% (29)	9.09% (8)	3.41% (3)	88
Reflector - iPad projecting	42.05% (37)	37.5% (33)	12.5% (11)	7.95% (7)	88
Doceri - iPad Screencasting	54.55% (48)	27.27% (24)	12.5% (11)	5.68% (5)	88
Using Gmail for Email	23.86% (21)	14.77% (13)	25% (22)	36.36% (32)	88
				Total Respondents	88

Frequency of Technology Use:

15. Frequency

	Daily	2-3 times a week	about once a week	several times a month	once a month or less	never	Response Total
SMARTboards	75% (66)	3.41% (3)	3.41% (3)	2.27% (2)	4.55% (4)	11.36% (10)	88
Document cameras	22.09% (19)	13.95% (12)	3.49% (3)	5.81% (5)	17.44% (15)	37.21% (32)	86
Student Responders/Clickers	5.75% (5)	4.6% (4)	4.6% (4)	11.49% (10)	10.34% (9)	63.22% (55)	87
COWs (MacBooks on carts)	3.45% (3)	11.49% (10)	12.64% (11)	9.2% (8)	25.29% (22)	37.93% (33)	87
Teacher iPad	20.45% (18)	9.09% (8)	7.95% (7)	12.5% (11)	22.73% (20)	27.27% (24)	88
Student iPads (Learning center/cart)	10.23% (9)	10.23% (9)	5.68% (5)	7.95% (7)	7.95% (7)	57.95% (51)	88
Chromebooks	3.57% (3)	8.33% (7)	7.14% (6)	3.57% (3)	13.1% (11)	64.29% (54)	84
Google Docs (student use)	5.68% (5)	9.09% (8)	9.09% (8)	7.95% (7)	15.91% (14)	52.27% (46)	88
Google Classroom	5.68% (5)	2.27% (2)	1.14% (1)	4.55% (4)	15.91% (14)	70.45% (62)	88
Khan Academy (Common Core Math)	3.45% (3)	2.3% (2)	0% (0)	2.3% (2)	8.05% (7)	83.91% (73)	87
						Total Respondents	88

Each teacher throughout the district is provided with a MacBook Pro laptop and an iPad loaded with various apps; they are able to obtain more apps for use or evaluation by requesting them through their site's TechLITE Mentor. An interactive SMART Board is mounted in virtually every classroom in the district. Each teacher is given a document camera, and class set of student responders when they complete 21st Century Classroom training, which is a requirement for all new district hires. The LEA offers district-wide wireless connectivity for all district-owned devices. In addition to these tools, each school site has a variety of technology carts including Mac laptops, Chromebooks, and iPads. Each K-5 classroom has a Learning Center of 10 student iPads equipped with grade-level apps.

All staff throughout the district utilize Gmail and Google Apps for Education for file storage and collaboration with both fellow staff members and with students. Staff members use accounts with the opusd.org domain, while student use accounts under the opusd.org sub-domain. Many teachers have begun to use Google Classroom with their students for managing classroom assignments, engaging in student collaboration, and turning in of student work.

2b. Student Access to Technology Tools, Equity of Access, and Replacement Policy.

The student access to instructional technology is currently growing. While only TechLITE classrooms have a 1-to-1 laptop ratio the district is moving closer toward that capacity in additional classrooms. The following is a list of computer technology that is dedicated for student use:

Elementary Schools:

- Each classroom K-5 will have its own learning center of 10 iPads by spring 2016
- Each elementary school will have 1 iPad cart (36 devices) and 2 Chromebook carts (36 devices each) for sharing/check out by any teacher
- Elementary schools have an additional dedicated Chromebook cart for 4th grade and another dedicated Chromebook cart for 5th grade (in addition to the 2 Chromebook carts for general checkout listed above).
- Each elementary school will have at least two COWS (Computers on Wheels) carts which each have 20 MacBook laptops. These COWs will be refreshed with updated laptops in Spring-Summer 2016.
- Each elementary school has a desktop computer lab with 35 iMac computers (last refreshed summer of 2015).

Medea Creek Middle School:

- 10 Chromebook carts (36 devices each) for shared use
- 1 iPad cart (36 devices) for checkout
- 4 MacBook carts (COWs - with 20 devices each) for shared use
- Desktop computer lab (36 iMacs) in the school library open to any teacher
- Dedicated desktop computer lab (36 desktop iMacs)
- Science and Technology innovation lab (20 desktop iMacs)

Oak Park High School:

- 6 Chromebook Carts (36 devices each) for shared use checkout
- 1 iPad cart (36 devices) for shared use
- 4 MacBook carts (20 devices each) for shared use check out
- 3 iPad carts (36 devices) for 9th grade foundations in science classrooms
- 6 iPad learning centers (10 devices each) for science classrooms
- Computer science lab (36 Windows PCs)
- Media Arts computer lab (36 iMacs)
- Foreign Language computer lab (36 Windows PCs)
- Engineering mobile computer lab (36 engineering laptops)
- Yearbook computer lab (16 desktop computers)

Oak View High School/ Oak Park Independent School

- 1 MacBook cart (20 devices)
- 1 set of 18 Chromebooks

Additionally, TechLITE teachers (Teachers who are cutting edge with technology) have a full Chromebook cart or iPad carts (36 devices) for their own classroom (not shared with other teachers) in order to experience a 1-to-1 classroom environment.

The number of middle school and high school carts are planned to increase further in order to provide 1-to-1 devices for the Language Arts/Social Studies teachers at the middle school (10 additional Chromebook carts to be acquired summer of 2016). This will allow them to deploy online curriculums like StudySync. The high school will also expand their number of Chromebook carts to enable 1-to-1 chromebooks in all English language arts classes (16 additional Chromebook carts to be acquired summer of 2016). The high school language arts department will use the Chromebooks to access an on-line repository of public domain versions of novels as their classroom anthologies for literature in classes. They will also be used for writing and collaboration inside these classes.

The special education department has its own set of iPads set aside to meet the needs of every special education student who has an identified need that can be addressed through technology. Each iPad is provisioned with the specific app(s) that are identified through the IEP process to assist the student in reaching their education goals.

All students have access to technology in their classrooms via mobile carts, learning centers, Computers on Wheels (COWs), and through each school's various computer labs. Each student has been issued a Google Apps For Education account that is created and managed by the school district under the opusd.us domain. Student above grade 2 may have access to student email (limited at the lower grades with increasing privileges up through middle school and high school). Students are expected to store all of their class files on Google Drive which they can access both from school and at home.

Technology Replacement Policy:

The district has a long term plan to refresh desktops every 8-9 years, and laptops every 7-8 years. Teacher laptops are refreshed every 3-4 years and those teacher computers are repurposed into student mobile computing carts. The district is quick to repair or replace any broken, damaged, or stolen computing device so that any negative impact on instruction is minimized. The district accepts that computers - and particularly mobile computing devices are going to be damaged through regular use and via wear and tear, and will in most cases, replace damaged, stolen, or otherwise broken devices at district cost unless there is clear negligence or malicious behavior that is the cause of the loss.

The network infrastructure includes all of the network cabling and networking equipment such as switches, wireless access points, servers, network filtering and security appliances, and associated hardware. Each class of equipment is placed on a recurring replacement schedule based on a life expectancy of about 7-10 years after which the district will refresh the old equipment with brand new equipment:

Network Component	**Life Expectancy**	**Approx. Cost**
Fiber Optic Cabling	15 years	$180,000
Copper Network Cabling	10-15 years	$300,000
Network Switches	10 years	$1,000,000
File Servers (including SANs)	6-7 years	$200,000
Backup Storage (with offsite recovery)	5-6 years	$200,000
Network Security Appliances	8 years	$125,000
Web Content Filtering Appliance	4-6 years	$60,000
Wireless Access Points	7-9 years	$300,000
Security Camera System	10 years	$350,000

The initial purchase of most of these infrastructure items were initiated in 2007 through the passage of Measure C6 and the replacement/refresh cycle times have been calculated using the expected life spans of each category of item.

A similar chart can be used to illustrate the computing devices that have been purchased to place technology into the hands of teachers and students since 2007.

Classroom Computing Device	**Life Expectancy**	**Unit Cost (including warranty, software, peripherals, installation)**
Desktop (iMac)	7-8 years	$2000
Laptops (MacBooks)	3 years (teacher) à 7 years (student)	$2000
iPads	7-8 years	$800
Chromebooks	4-5 years	$400
Interactive Projectors (SMARTBoards)	5-7 years	$2000
Interactive Whiteboards	10-15 years	$3500

The two charts above, the Network Components replacement strategy and the Classroom Computing replacement strategy, are used for long term fiscal planning to ensure that the district has sufficient budgeted resource to effect an ongoing refresh of outdated technology. See section 4 in this technology plan for a more detailed description of how this maps out into purchasing plans over the next 10 years.

SECTION 2 of the District Technology Plan focuses on how technology will be used to impact teaching and learning. Much of the district's efforts in this regard will be built upon the foundation of an districtwide Student Technology Skills Scope and Sequence matrix (a.k.a. Technology Curriculum Standards) that is being developed to embed student technology skills and standards throughout the curriculum. Since this technology curriculum standards is central to how the district will embed technology throughout the curriculum, the next three sub-sections of the technology plan will be answered together since they all draw from the same base of the technology curriculum standards.

2c, 2d. 2e. **Using technology to improve teaching and learning. Student technology skills and information literacy skills for college and career readiness. Internet safety and the appropriate and ethical use of technology**.

The district's plans for using technology to enhance student learning and acquisition of digital citizenship and internet safety skills are built upon three main areas of focus: 1) Technology Curriculum Standards, 2) Data Augmented Instruction and Assessment, and 3) Electronically delivered curriculum.

I. Student Technology Curriculum Standards

The district examined Common Core curriculum standards, National Educational Technology Standards for Students (ISTE NETS*S), California Statutory requirements for teaching Digital Citizenship (AB307 Chavez Bill), Next Generation Science Standards (NGSS) and developed a list of student technology skills needed to meet those standards and requirements. Individual student technology skills were organized according to grade level and are divided up into seven categories:

1 - Creativity and Innovation
2 - Communication and Collaboration
3 - Research and Information
4 - Critical Thinking
5 - Digital Citizenship
    5a. Appropriate and ethical use (Cyberbullying)
    5b. Internet Safety (digital footprint)
    5c. Plagiarism
    5d. Copyright and Fair Use
    5e. File Sharing
6 - Technology Operations
7 - Keyboarding

Teams of teachers at each grade level and across major curriculum strands began meeting during the 2015-2016 school year to examine those technology skills requirements, identify integrated lesson activities, research best practices, and develop a scope and sequence of student technology skills to be addressed at each grade level. At the middle school and high school levels, teachers meet in department teams or individually with an Instructional Technology Specialist to examine standards, identify areas that may not be being addressed by the current curriculum, and plan technology-infused lessons to address those standards. A comprehensive list has been developed detailing lessons including links to plans and student work samples so that these resources can be shared with other teachers in the department. The representatives working on the Technology Standards Committee can then work to support their colleagues with the implementation and execution of technology standards. The high school and middle school teams' agenda will be expanded next year by adding additional quarterly meetings after school to work on creating future advances in the technology curriculum and to discuss future technology practices to help assist in the transition to 1-to-1 classrooms.

A working draft of the technology curriculum for the secondary schools along with examples of its success may be viewed below: See **Appendix A** for snapshot of the standards as of April 2016.

In a similar fashion representatives from each elementary school are meeting in grade level bands to examine standards, discuss lessons, research and identify resources and lessons, and identify a scope and sequence of requisite skills necessary to support classroom instruction. Teachers work with a Instructional Technology Specialist and have compiled a list of lessons, activities, and resources that will meet standards at their level in addition to examining standards before and beyond their grade level to ensure articulation of skills. In the coming years, the scope and sequence of requisite skills will be shared with elementary Computer Lab instructors to ensure students are acquiring the skills they need to complete technology infused activities in the classroom.

II. Data Augmented Instruction and Assessment

EADMS Assessment Management System will be used to create formative and summative assessments that are easily analyzed by the grade level teachers to improve student achievement. The formative assessments in the system will help guide both teacher instruction and student learning and provide immediate feedback to both students and teachers on how to improve instruction. The summative assessments will be viewed across a grade level in order to reflect on instruction and to help ensure that students are progressing accordingly through the curriculum.

The published tests and item banks inside EADMS contain problems that mimic SBAC testing and are SBAC test approved questions. They may be used as district benchmarks and as problems for formative assessments. All questions are tied to state standards and follow the levels of rigor required by the state. Reporting of all data in EADMs follows the standard cutpoints on SBAC testing (advanced, meeting expectations, etc.) and can be changed by assignment to mimic other measures of success. Lead teachers may be given time over the summer to help create benchmark tests that connect to the curriculum maps for the grade level in order to create benchmarks that are appropriate for specific points in the curriculum.

Teachers indicated a desire to use the tool to conduct formative assessment, but the tool lacked necessary components to efficiently deliver meaningful feedback to students. District administration has been in contact with EADMS developers who will be working with us to engineer a tool that will better meet our needs.

FastBridge is an online Language Arts assessment solution that is being piloted in certain elementary classrooms (elementary pilot going on now) and could become an effective SRI/DIBELS replacement both at the elementary and middle schools.

III. Electronically Delivered Curriculum

The district is currently piloting electronic curriculum and curriculum enhancement programs. The programs are geared towards alignment with the CCSS and the future NGSS standards.

The following are examples of the curriculum and intervention tools that the schools are currently piloting Study Sync, Project Lead the Way (PLTW), Cisco Networking Academy, Edhesive (online AP Computer Science course), etc. High school English classes will develop and use a digital repository of Public Domain and Open Literature. These curriculums and tools are tied to the CCSS and possess technology integration components. They will be used in general education classes, elective classes at the high school and middle school, as tools to replace the middle school's Read 180 curriculum for students who require scaffolding, and as tools to enhance the curriculum. Currently these types of curriculums are being piloted and are restricted by the number of devices currently at each school. These curriculums include assessment, collaborative work, and immediate feedback components through technology. The PLTW curriculum also includes STEAM focused activities and Maker movement activities including 3D printing and 3D modeling.

Recommended Teaching and Learning with Technology Action Items broken out by year:

Year 1 (2016-2017):

- Creation of a high school language arts repository of public domain online books
- Use of the Overdrive ebook repository for books in the classroom that are not in public domain
- Implementation of middle school Study Sync blended learning curriculum
- Expand student BYOD pilot to secondary schools
- Expansion of EADMS pilot to include benchmark assessments for specific subjects and grade levels

Year 2 (2017-2018):

- Begin to phase out computer lab designated time for fourth and fifth grade.
- Deploy 1:1 Chromebooks in all Grade 4/5 classrooms with a learning center of iPads available for those grade levels.
- Technology related skills will be fully integrated into the 4/5 curriculum.
- Designated computer lab will continue to take place for K-3.

Year 3 (2018-2019):

- Computer labs at elementary schools are converted to Creativity and Innovation Spaces.
- All elementary schools are 1-to-1.

3. PROFESSIONAL DEVELOPMENT

3a. Staff technology proficiency and integration skills and needs for professional development.

2015 Teacher technology survey: Teachers report TOSA support as being invaluable not only in learning new technology but in implementing it in the classroom and troubleshooting problems with the hardware. While some teachers are still hesitant to use technology extensively in the classroom, others are experimenting and experiencing much success. Of special note was the gratitude for the hard work and dedication of the tech support staff, which is seen as overtaxed. Google Docs was most frequently mentioned as a highlight of technology usage, though many other programs are in use and useful. Suggested improvements include better communication between the technology department and teachers, more devices available for classroom use, a solution for printing (from any device to any computer), and more summer training. Some teachers are feeling overwhelmed by the quantity of learning and options, wonder whether we are relying too much on technology in the classroom, and rue the wasted class time when equipment, the server, or software does not work. Others report excitement at the possibilities the technology offers and request more training, hardware, and staff support.

Statistics from Teacher Tech Survey (2015)

Accessing district professional development opportunities:

- 61% teachers reported that district training opportunities are adequate and they have attended some of them.
- 21% teachers report that although district trainings are interesting, they are have not attended due to scheduling conflicts.

Scheduling of training opportunities:

Highest interest: 49% - Summer time, 33% - after school
Moderate interest: 35% - Summer time, 49% - after school

Interest in Professional Development Topics (moderate to high interest):

Managing a set of iPads (55%)
Finding iPad Apps for education (52%)
Google Apps For Education (47%)

Interest in utilizing Instructional Technology Specialists (moderate to high interest):

Lesson Design - 41%
Lesson Modeling - 32%
Lesson Backup assistance - 26%
Lesson Feedback - 17%
Class coverage for observation of others - 44%

See **Appendix C** for a more detailed survey results (Spring 2015).

3b. Professional Development Strategy

Professional Development activities at OPUSD revolve around three layers of instructional technology leaders and a restructured approach to delivering PD:

I. Instructional Technology Specialists (Tech TOSAs)

Tech TOSAs are teachers on special assignment whose position fills the following roles:

1. Assist teachers in using technology in their classroom.
2. Manage TechLITEs and TechLITE meetings.
3. Manage technology professional development throughout the district.
4. Assist in professional development for deployment of technology in the district with the increase of 1-to-1 devices in classes.
5. Pioneer new technology and innovative curriculum to pass on to TechLITEs and the schools.

Currently there are 2 Tech TOSA positions in the district. The district is currently exploring the feasibility of increasing the number of Tech TOSA positions to 3 as the demand and supply for 1-to-1 devices inside the classroom grows.

Tech TOSAs work with TechLITEs to create a culture of ongoing professional development. Tech TOSAs and TechLITEs work together to improve the culture of professional learning by redefining what professional development looks like in the district. Examples include the creation of EdCamp- Oak Park, an "unconference" model of professional development, the inclusion of the exploratory model of PD where teachers explore and play with technology as professional development, and the beginning of STEAM/innovation space PD.

II. Technology Leaders Integrating Technology in Education (TechLITEs)

TechLITEs are classroom teachers who are leaders of technology innovation. Each school site has 2-3 teachers designated as TechLITEs spanning a variety of grade levels or content specialties. The TechLITEs' role is to assist teachers with a variety of technology related support. The variety of technology related support activities include troubleshooting technology, providing site and district professional development on technology classroom resources and district initiatives, and assisting teachers with planning and research on the best ways to infuse technology in the classroom to address the CA standards. A key responsibility of these teacher leaders is to pilot/explore new technology and curriculum and the role is expanding to assist other teachers in adopting technology during the school day when possible. All TechLITEs have full class sets of devices in their classrooms which could include iPads, Chromebooks, or a combination of these devices. TechLITEs meet monthly to explore new ideas with technology, plan

Professional Development, and participate in developing District Policies relating to technology. TechLITEs are given priority for Technology related Professional Development, and are encouraged to share their learning with colleagues at their school sites.

III. Technology and Learning Coach (TLC)

The Technology Learning Coach will be a new position the district intends to pilot in 2016-17 with the goal of expanding it in subsequent years. The TLC will be a full -time teacher who will have regular release days (average of once every three weeks) to support classroom teachers in specific grade bands. The TLC will assist teachers with technology-infused lesson design and implementation, will model instructional practices and classroom management with technology alongside the classroom teacher, and will continue to facilitate development of student technology standards. The TLC will continue to manage the Technology Standards Implementation Committees which look at needs of teachers and students at the grade level bands, then research and develop content to meet those needs.

IV. Redesign of district staff development protocols

Staff Development protocols are changing to expand school and district-wide collaboration. The elementary schools are considering adopting a common banking day to allow teachers from all three sites to work collaboratively, including targeted professional development (PD) based on teacher feedback and needs. The high school is proposing to design a way to alter their planning time to include monthly PD.

The options in staff development formats are expanding as well towards 21st century design principles. Changing the focus of PD from a traditional presenter-centered model, to a teacher/learner-centered model. This model focuses on collaborative, problem-solving, and exploratory models of training. It promotes relevant, standards-centered PD that emphasises giving teachers time and support to collaboratively research and develop usable content and best practices for the classroom. The district hosted its first EdCamp “unconference” for teachers by teachers, and is planning on making the EdCamp model a yearly event as well as a format for District PD on Buy Back days. Our PD model is going to change to be more site, subject, and grade level specific, and will continue to be lead by TOSA’s and TechLITEs. The district will also adopt a Playdate/Appy Hour format of PD where teachers gather together and explore first-hand technology and new curricular ideas for the classroom. Furthermore, a lot of PD is going to be site or grade specific and provided by TechLITEs who have a working knowledge of the needs of their school.

Recommended Professional Development Action Items broken out by year:

Year 1 (2016-2017):

- Plan toward hiring a third Instructional Technology Specialist
- Provide summer institutes for curriculum planning (all curricula will be submitted to the DO) including EADMS formative and benchmark assessment creation
- Shift focus of 21st Century Classroom training cohorts beyond SMARTboard technologies to include use of Chromebooks, iPads, Google Classroom, etc.
- Evaluate funding model paying for elementary computer lab instructors (should district take over compensation for computer lab instructors….?) Expand position beyond 18 hrs/week.
- Create training program for all elementary site computer lab teachers in order to align necessary technology related skills and the core curriculum. (Training will take place in the summer before the start of the new school year)
- Classroom teachers will provide computer lab instructor with direction related to desired technology skills at least 1 month prior to instruction.
- Paid prep-time will be provided by the district to the computer lab instructors so each grade level will be able to schedule at least three 1-hour meetings with the computer lab teacher throughout the year to plan and evaluate collaborative effort.
- Elementary computer lab teachers will be provided additional training prior to 2017/18 school year to take on Technology Innovation Specialist role for the following school year.
- Current participants in the Student Technology Standards Committee will continue to meet 1 time/quarter to continue professional development, and research and develop curriculum in order to bring back to their grade level team. This time will also be used to evaluate the meaningfulness of the K-12 Technology Standards implementation.
- Explore efficacy of aligning elementary “banking” days to synchronize opportunities for K-5 professional development and planning.
- Monthly technology meetings at the high school during banking time that focuses on collaboration and use of online tools inside the classroom
- Convert some district professional development opportunities into OPUSD-hosted Ed Camps
- Investigate innovative ways to increase teacher buy-in for professional development (e.g. Chrome Warrior, an online PD incentive system)

Year 2 (2017-2018):

- *Begin to phase out computer lab designated time for fourth and fifth grade.*
- *Implement 1:1 Chromebooks in 4/5 with a learning center of iPads available for those grade levels*
- *Technology related skills will be fully integrated into the 4/5 curriculum.*
- *Designated computer lab will continue to take place for K-3.*
- Computer lab teachers will work in the classroom with 4/5 to coach/assist as needed (and as time permits).
- Begin transition of elementary computer lab instructors into a Technology Innovation Specialists (Share one or two between 3 sites?) (Teacher On Special Assignment?)
- Implement synchronized planning days at the elementary schools to facilitate district wide K-5 planning and professional development.
- Computer lab instructors will continue receiving coaching-related professional development.
- Student Technology Standards Committee will continue to meet one time per quarter.
- Paid prep-time will be provided by the district to the computer lab instructors so each grade level will be able to schedule at least three 1-hour meetings with the computer lab teacher throughout the year to plan and evaluate collaborative effort.
- Expand the number of Technology Learning Coaches

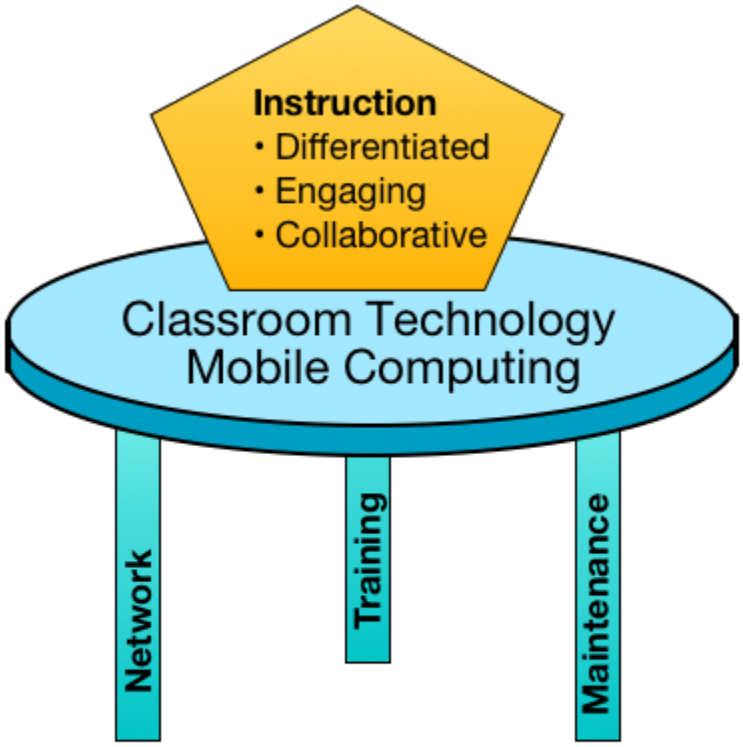
Year 3 (2018-2019)

- *Computer labs at elementary schools are converted to Creativity and Innovation Spaces.*
- *All elementary schools are 1:1.*
- All elementary computer lab instructors become technology innovation specialists.
- Student Technology Standards Committee team will continue to meet one time per quarter.
- Technology Innovation Specialists become full-time employees.

4. INFRASTRUCTURE, HARDWARE, TECHNICAL SUPPORT, SOFTWARE, AND ASSET MANAGEMENT COMPONENT

4a. Existing Infrastructure, Hardware, Support Systems, and Resources

The district views classroom technology not as a goal nor destination, but as a platform for providing quality learning experiences that are differentiated, engaging, and collaborative. This platform is held up by three critical pillars of support which each must be properly provisioned and maintained in order to enable the platform to function seamlessly and efficiently. When technology is properly implemented, it should fade into the background allowing the teaching and learning experiences to take center stage.



Infrastructure

- Wired network (Cisco Switches)
- Wireless network (Ruckus Wireless)
- Network Firewall (Palo Alto Networks)
- Internet Content Filter (iBoss)
- Internet Service Provider - 1Gbps from VCOE

21st Century Classrooms
- SMARTBoards
- Teacher Laptops
- Teacher iPads
- Student iPad Learning Centers (10 per Elementary Classroom)

Computer Labs
- 3 ES iMac Labs
- 2 MS iMac Labs
- HS Media Arts Lab (iMacs)
- HS Computer Science Lab (PC)
- HS Foreign Language Lab (PC)
- HS Engineering Lab - 3D printing
- HS Engineering Lab - student PC laptop workstations for engineering

Mobile Carts
- iPad Carts
- Chromebook Carts
- iPad Learning Centers

1-to-1 Classrooms
- TechLITEs - Chromebooks
- TechLITEs - iPads
- 9th Grade Science - iPads
- High school English - Chromebooks (Fall 2016)
- Middle school English - Chromebooks (?)

Electronic Learning Resources
- Google Apps For Education (Google Classroom/Google Drive/Gmail)
- EADMS
- FastBridge
- Study Sync (Middle School English Language Arts)
- Secondary English - Digital Resources Repository

Training Personnel
- Instructional Technology Specialists a.k.a. TechTOSAs (2) - work toward hiring a third
- TechLITEs (16)
- Technology and Learning Coach - pilot in 2016-17 school year

Tech Support Personnel

- Technology Director
- Data Specialist
- Network Administrator
- 3 Computer Support Technicians
- Student Interns

4b. Infrastructure, Hardware, Support, and Resource Needs

Refresh of classroom network switches (approximately 50 network switches) targeted for Summer 2016 and utilizing federal ERATE discounts (up to 40%) for internal connections.

Completion of WiFi buildout (currently 60% classrooms have own WiFi access point). Finish deploying 802.11ac wave 2 Wifi Access Points so every classroom/instructional area has its own dedicated WiFi Access Point. Targeted for Summer 2016 and utilizing federal ERATE discounts (up to 40%) for internal connections..

Acquire additional Chromebooks and iPads to move closer toward a 1-to-1 learning environment in as many classrooms as possible. Key to doing so will be identifying a stable funding source for the on going refresh of mobile devices.

Bond funds will not sustain a 1-to-1 mobile computing environment let alone establish one, so the district will need to either institute a student Bring Your Own Device program (BYOD), a parent Lease To Own program (LTO), a parcel tax, an increase in general fund allocation, or perhaps a combination of the above.

In order to accomplish this, the district will want to:

- Investigate various BYOD and Lease To Own models by which the community can participate in a sustainable plan to have sufficient devices for students to use.
- Consider deploying BYOD at secondary schools with an emphasis on providing Chromebooks where possible to make up shortfalls.
- Consider a phased roll out of a 1-to-1 mobile device initiative targeting certain grades first and adding additional grades in subsequent years

Mapping out the refresh cycles for both network infrastructure and computing devices over the next 10 years, providing a baseline for estimating the financial resources needed to maintain the existing level of classroom technology deployments, with a measured level of computing device growth each year. The following includes the refresh/acquisition timeline for various technology devices needed to maintain the current technology deployments in the district with a modest level of growth (but not sufficient to carry out a sustainable 1-to-1 device initiative):

2015-16		HS Yearbook Lab (1/2 lab)
		Elem Mobile Devices LC expansion (LC per K-5 class+)
		Secondary Mobile Device carts expansions
		Refresh AD redundancy HA network controller server
		Content Filter Refresh (better Social Media support)
2016-17		Network Switches refresh (Cisco 3850)
	**	Mobile Devices expansion (iPads/Chromebooks)
		MCMS Library iMac Refresh?
2017-18		Network/File Servers Refresh (4)
		Teacher/staff iPad Refresh (240)
	**	Mobile Devices expansion (iPads/Chromebooks)
		Remaining Wireless Buildout (if needed)
2018-19		Chromebook Refresh (all HP/Dell are EOL) qty 1400
	**	1st Gen iPads due to be replaced if no 1-to-1 (qty 600)
		Student COW refresh (qty 120)
2019-2020		Teacher Laptop Refresh (240 Laptops)
	**	Student iPad Refresh (300 iPads)
		Mobile Devices expansion (iPads/Chromebooks) ???
		Possible Backup Storage Refresh IF NEEDED
2020-21		Refresh Storage SAN servers (qty2)
		New Internet Content Filter
		Refresh Teacher/staff iPads (240)
		Student iPad Refresh (300 iPads)
		MS Computer Lab (56 iMacs)
		HS CompSci Lab (37 workstations)
		HS Engineering Lab (44 workstations)
2021-22		New Internet Content Filter
		Potential SMARTboard refresh cycle begins (60 boards)
		HS Graphic Arts Lab (37 iMacs)
		HS Foreign Language Lab (37 desktops)
		ES Computer Labs x3 (108 iMacs) IF NEEDED
		HS Yearbook/Journalism lab (24 iMacs)
		Office Desktops (40 iMacs)
2022-23		SMARTboard Refresh (40 boards)
		Refresh of Windows Servers
		New classroom network cabling
		New Fiber Optic network cabling
2023-24		SMARTboard Refresh (30 boards)
		New Firewall
		Refresh of Network Switches (Wireless/Sec Cam)
		New Wireless Network
		Teacher Laptop Refresh (240 laptops)

2024-25	SMARTboard Refresh (30 boards) New Security Camera System MS Library Lab (37 desktops) IF NEEDED Chromebook Refresh (2000) Student iPad Refresh (qty 900)
2025-26	SMARTboard Refresh (30 boards) Refresh of Network Switches (Classroom) Refresh of Storage SAN servers (qty 2) New Internet Content Filter Student iPad Refresh (qty 300) Teacher iPad Refresh (240)

The approximate cost of executing the above listed technology refresh cycles over the 10 year period 2016-2026 is $11,500,000. If we put in a placeholder budget item of $1,500,000 for mobile device expansion and $500,000 for growth and sustaining of new Career Technical Education STEAM initiatives and an estimated $300,000 for projector replacements, the grand total comes to roughly $13,800,000 over the next 10 years. As C6 funds will be completely depleted well before that total is reached, the district will be reliant on securing an additional follow-up Bond Measure to carry out this spending plan. We recognize that Technology involves a rapidly changing landscape and that these rough estimates do not take into account unforeseen growth, new technologies, or shifts in the ways technologies are used. This plan also does not accommodate the on-going need for acquisition and refresh of a districtwide 1-to-1 mobile computing device initiative, although it does lay a strong foundation and bring the district significantly forward in being closer to fielding such an initiative.

5. MONITORING AND EVALUATION

5a. Monitoring

Director of Technology is a member of the district's Executive Cabinet which meets weekly to discuss matters of importance and relevance (including Technology and Instruction) to the successful operation of the school district.

Director of Technology provides a weekly summary of technology accomplishments, developments, and success stories to the district executive cabinet and the governing board. (a.k.a. Friday Notes for Technology)

Technology Director meets monthly with the district Leadership Team, Principal's Group, and the district Curriculum Council to discuss technology's impact on teaching and learning practices and to solicit feedback about ways to improve its technology services.

Technology Director meets monthly with the district Technology Committee to discuss technology's impact on teaching and learning practices and to discuss and evaluate changes to technology program, planning, and allocation of resources to better meet the needs of the district's educational mission.

District Technology Committee receives request for new technology resource allocations and approves those requests and/or makes recommendations to Governing Board to proceed with major purchases.

The District Technology Committee meets monthly to discuss and evaluate success of programs being implemented, identify needs of teachers, students, and staff, and determine the best procedures for addressing those needs. The Tech Committee is comprised of representatives from all levels, and representatives are able to bring site based concerns and requests to the committee.

Instructional Technology Specialists meet monthly with TechLITEs to discuss progress and develop solutions to roadblocks to effective use of technology in the classroom.

5b. Evaluation and Communication

The District Technology Committee meets monthly to discuss and evaluate success of programs being implemented, identify needs of teachers, students, and staff, and determine the best procedures for addressing those needs.

Director of Technology provides Bi-Annual technology update report to governing board on the state of technology deployment and utilization in the district.

Director of Technology provides annual reports to the Bond Oversight committee concerning how Bond funds have been used, or are being used to acquire technology and the impact of those purchases on instruction.

The district's annual teacher technology survey (administered in the Spring) gauges teacher use of technology and collects information about teacher's needs for support, staff development, and access to resources and training.

The district administers an annual parent technology survey (administered in the Winter) to gauge community support and feedback on the district's use of technology to enhance learning.

District maintains social media feeds showcasing effective uses of technology for teaching and learning. These feeds are open to the entire community throughout the year, and can be found at:

- https://facebook.com/oakparkusd
- https://twitter.com/oakparkusd

6. APPENDIXES

Appendix A: Student Technology Standards Scope and Sequence Matrix:

Elementary Technology Standards Scope and Sequence: https://goo.gl/J0z776

Category	Standard (CCSS, ISTE Standards)	Implementation 2015-01-28	Required Software/App
Kindergarten			
1; 2	With guidance and support from adults, students begin to and use a variety of technologies and electronic devices (e.g., laptops, iPads, Smart Response, headphones).		
1	Begin to add drawings or other visual displays to descriptions as desired to provide additional detail.	Turtle Diary Matching Game: http://www.turtlediary.com/kindergarten-games/ela-games/matching-actions-to-pictures.html	
5a,5b	Demonstrate the safe,cooperative, and appropriate use of technology.		
6	Communicate about technology using developmentally appropriate and accurate terminology.		
2; 3, 5c, 5d	Begin to participate in shared, whole class research and writing projects utilizing technoloy.	KidRex (safe search engine for kids)	
1	Begin to demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.		
2; 6	With guidance and support from adults, use technology to engage in learning activities with learners from multiple cultures and locations.	Mystery Skype	
3; 4	Begin to apply digital tools to gather, evaluate, and use information.		
4	Begin to use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.		
7	Begins to develop a basic understanding of keys and their functions	Keyboard learning center	
End of Kindergarten Benchmarl	Keyboarding & Word Processing: Identify and use numbers and letters on the keyboard and/or screen (for iPad); Ability to type first name, Uses age appropriate punctuation and capitzliation Basic Operations: Demonstrates how to turn on and off a computer or iPad; Understands that icons are symbols used to represent a command, file or application; Demonstrates how to open an application and save a document; Identifies basic parts of a computer (e.g., screen, keyboard, track pad); Begins to use basic mouse functions and/or swiping gestures Internet, Networking & Online: Understands that the Internet links computers around the world, allowing people to access information and communicate.		
1st Grade			
1; 4	Reinforce students to add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.		
3; 6	Begin to know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in an electronic text.		
1	Reinforce students to demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.		
5a, 5b	Begin to understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.	Creative commons	
6	Begin to demonstrate a developmentally appropriate understanding of technology concepts, systems, and operations.		
1; 3; 5c, 5d; CCSS	With guidance and support from adults, use a variety of digital tools to produce and publish graphic organizers and writing, including in collaboration with peers.		
1 - 3, 5e	Begins to participate in shared research and projects utilizing technology		
3; 4	Ask and answer questions about key details in information presented using multimedia.	Zaption.com (students watch video and answer questions throughout)	
2, 5e	Begin to use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.		
3	Reinforce students to apply digital tools to gather, evaluate, and use information.	Teach right click to look-up a word; Links on teacher website	
4	Reinforce students to use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.		
7	Reinforce a basic understanding of keys and their functions	Computer lab teacher	
End of 1st Grade Benchmarks	Keyboarding & Word Processing: Identifies home row keys; Ability to type first and last name with proper capitalization; Ability to type original sentence with punctuation; Continues to use operations keys (e.g., space bar, return, backspace); Begins to experiment with changing font size and appearance; Left and right hand placement, WPM: Basic Operations: Demonstrates how to open and quit an application; Begins to demonstrate use of log on/log off procedures; Ability to print		

Category	Standard (CCSS, ISTE Standards)	Implementation 2015-01-28	Required Software/App
	Multimedia & Presentation: Ability to use a drawing program to produce a finished product		
2nd Grade			
3; 4; CCSS	Recount or describe key ideas or details from informational or expository text presented using multimedia.		
1; 2; 4; CCSS	Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.		
3; 4; CCSS	Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot. Identify keywords for online searching. Citations for online sources (author, title)		
4	Use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.		
5a, 5b	Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.		
6	Demonstrate a developmentally appropriate understanding of technology concepts, systems, and operations.		
1; 2; 4; 5c-e; CCSS	With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.		
1 - 3, 5c-e	Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).		
1	Demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.		
2, 5e	Use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.		
3	Apply digital tools to gather, evaluate, and use information.		
1; 4; 6	Introduction to coding	scratch.mit	
7	WPM: 5 - 10		
End of 2nd Grade Benchmarks	Keyboarding and Word Processing: Recognize the functions of basic file menu commands (e.g., New, Open, Close, Print); Ability to type and edit a sentence with proper capitalization and punctuation; Ability to insert a picture; Builds upon basic functions (e.g., adjusting font style, size, and color, underlining, centering text); Complete teacher generated graphic organizer using text and pictures; Ability to name and save a file; Ability to type a multi-sentence document; WPM: 5 - 10 Basic Operations: Ability to maximize and minimize windows; Ability to log-in to GAFE accounts Multimedia and Presentations: Begins to create original digital presentations Internet, Networking, and Online: Uses teacher created bookmarks or links to gather information from the Internet; Uses the Internet for virtual field trips		
3rd Grade			
1; 2; 5c, 5d; CCSS	With guidance and support from adults, use technology to produce and publish writing (using proper keyboarding skills) as well as to interact and collaborate with others.		
1 - 3, 5c, 5d	Conduct short digital research projects that build knowledge about a topic.		
3; 4; CCSS	Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.		
1	Demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.		
2, 5e	Use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Use transitions properly and add text to presentations. Participate in a discussion forum-message, comment, reply (blog, comments on Google Docs...) Use citations for online sources (place of publication, author)		
5a, 5b	Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.		
6	Demonstrate a developmentally appropriate understanding of technology concepts, systems, and operations.		
1; 2; 4; CCSS	Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. Create and post to a blog (comment, use as resource, create, write) Cut and Paste media into presentations.		
3; 6	Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.		
5c, 5d, 6	Apply digital tools to gather, evaluate, and use information. Students identify relevant information for online research.		
4	Use critical thinking skills to plan and conduct research, manage projects, solve problems, develop strategies for troubleshooting, and make informed decisions using appropriate digital tools and resources.		
1; 4; 6	Continue to participate in coding activities		
7	WPM: 25		
End of 3rd Grade Benchmarks	Keyboarding and Word Processing: Uses spell check to edit a document, Types a document in paragraph form, Ability to insert, re-size, and edit a picture; Demonstrates intermediate keyboarding skills and proper keyboarding techniques; Identifies and uses symbol keys; Improves upon basic formatting functions (e.g., line spacing, margins, document orientation); WPM: Basic Operations: Opens multiple windows and applications at once and able to navigate between them Spreadsheets: Understands that spreadsheets are a tool to record, organize, and graph information. Internet, Networking, & Online: Uses the Internet as a resource for information, including to access school and district websites; Conducts web and image searches Multimedia & Presentations: Produces a multiple slide digital presentation		

Category	Standard (CCSS, ISTE Standards)	Implementation 2015-01-28	Required Software/App
4th Grade			
1; 2; CCSS	Type informative/explanatory texts to examine a topic and convey ideas and information clearly. Introduce a topic clearly and group related information in paragraphs and sections, include formatting (e.g. headings), illustrations, and multimedia when useful to aiding comprehension.		
3; 4; CCSS	Identify the reasons and evidence a speaker or media source provides to support particular points.		
7; CCSS	Demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting		
2, 5c, 5d	Conduct short research projects that build knowledge through investigation of different aspects of a topic. Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Organize presentations (main idea with supporting details)		
5a, 5b	Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.	Current event relating to technology (e.g., Snapchap being hacked, new socail media site, cyber bullying, Google science fair winner)	
6	Demonstrate a developmentally appropriate understanding of technology concepts, systems, and operations. Use spell and grammar check on final drafts.		
1; 2; 5c, 5d; CCSS	With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting. Create and post to a blog (comment, use as resource, create, write)	Google Docs for at least one group research project (Mission Project) Options to create and build mission using technology (Mindcraft, 3D printing)	
1; 3; 4	Conduct short research projects that build knowledge through investigation of different aspects of a topic.		
1; 4; CCSS	Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.	Zaption.com	
1; 4; CCSS	Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.		
2, 5e	Use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Organize presentations (main idea with supporting details)	Mystery Skype in California	
3, 5c	Apply digital tools to gather, evaluate, and use information. Write citations for graphic organizers. Identify URLs		
4	Use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Demonstrate Design Elements (font, transitions, color, backgrounds, picture formatting)		
1; 4; 6	Continues to participate in coding activities		
7	WPM: 20		
End of 4th Grade Benchmarks	Keyboarding and Word Processing: Works with peers on digital projects; Ability to copy, cut, and paste texts within a document as well as from one document to another; Ability to type a properly formatted letter Basic Operations: Ability to decide on the best application to use towards a task Spreadsheets: Identify and explain terms and concepts related to spreadsheets (e.g., cell, column, row, values); Create bar and pie graphs, Record data and identify tools used to collect, analyze, and display data Internet, Networking, & Online: Begins to use email to communicate with teachers; Uses the Internet to gather information and research topics		
5th Grade			
1; 6	Exhibit Desktop Publishing skills using appropriate tool: paragraphs, alignment, file management	Newspaper of all writing from 1st semester (poems, summaries, projects, etc)	
1; 2, 5a	Create a document that can be shared with teacher and peer for editing		
7; CCSS	Demonstrate Keyboard skills by typing two pages worth of text in a single sitting		
1; 2; 4	Create, and present a multimedia presentation to inform and/or persuade		
3, 5c, 5d	Access primary and secondary sources using databases, in research-based project or presentation		
3; 5c, 5d	Use appropriate MLA citations in all multimedia work, and apply copyright knowledge (copyright, fair use, copyright infringement and consequences)		
3; 4; CCSS	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently		
5a, 5b	Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.		
1; 3	Develop a spreadsheet to report data, generating and understanding different graphs and identifying the best-fit graph for the data	Given a budget plan a party (graph it, include break down of costs by percentages)	
2, 5a, 5b	Participate in a discussion forum (develop post, respond to other posts)		
1; 4	Create a graphic organizer to illustrate a concept or plan writing		
4; CCSS	Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem)		
1; 4; 6	Continues to participate in coding activities		
7	WPM: 35-40		
End of 5th Grade Benchmarks	Keyboarding and Word Processing: Uses word processing to replace hand-written tasks (e.g, writing, n 25-ote-taking, emailing); Ability to create a table within a word processing application; Demonstrates proper citations in digital work; Produce full-edited writing compositions; WPM: 35-40 Spreadsheet: Ability to enter/edit data in spreadsheets and perform calculations using simple formulas (addition, subtraction, multiplication, division); Ability to insert a graph into a published piece Internet, Networking, & Online: Knows how to create and insert a hyperlink; Ability to differentiate credible versus non-credible websites; Ability to conduct and narrow key word searches; Ability to create and add a bookmark		

Secondary Technology Standards Scope and Sequence: https://goo.gl/rGcvP0

Category	Skill (CCSS, ISTE Standards)	Teacher Name	Assignment/ approx. date of activity	Links to Student Work				
6th Grade								
6	Exhibit Desktop Publishing skills using appropriate tool: paragraphs, alignment, file management,tables, columns, insert images, wrap text							
2; 5a, 5e; CCSS	Contribute to a collaborative document (identify uses, understand protocol, change share settings) in a group project	Vanessa Heller	12/1/2015	https://twitter.com/kkibteach/status/676866249159143425				
6	Access class content & take online quizzes as formative assessment using an LMS or other format							
1 - 4; CCSS	Research, create, and present a multimedia presentation to inform and/or persuade, with supporting evidence. AND include multimedia components (e.g. graphics, images, music, sound) and visual displays in presentations to clarify information.							
3; 4; 5c, 5d; CCSS	Access primary and secondary sources using databases, and using a general World Wide Web search applying website-evaluation skills, in research-based project or presentation	Vanessa Heller	11/1/2015	https://twitter.com/Hell2Teach/status/662105621135622148	https://twitter.com/Hell2Teach/status/661309252120608769			
3; 5c, 5d; CCSS	Use appropriate MLA citations in all multimedia work, and apply copyright knowledge (copyright, fair use, copyright infringement and consequences, Creative Commons)							
1; 4	Create a digital graphic organizer to illustrate a concept	Vanessa Heller	12/8/2015	https://twitter.com/Hell2Teach/status/674308191955124224	Rubric	https://drive.google.com/a/opusd.org/file/d/0BxRITPpsgTVNS1XU2FteFA4bU5NZZhwOV9IYUp5QlK5b1VB/view?usp=sharing		
4	Pick the appropriate presentation tool (for creator, for audience)	Vanessa Heller	12/8/2015	https://twitter.com/Hell2Teach/status/674308191955124224	Rubric	https://drive.google.com/a/opusd.org/file/d/0BxRITPpsgTVNS1XU2FteFA4bU5NZZhwOV9IYUp5QlK5b1VB/view?usp=sharing		
4; CCSS	Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words)							
4; CCSS	Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film)							
4; CCSS	Integrate information presented in different media or formats (e.g., visually, qualitatively) as well as in words to develop a coherent understanding of a topic or issue.	Vanessa Heller	11/21/2015	https://twitter.com/Hell2Teach/status/667491695030726656	https://twitter.com/Hell2Teach/status/661309252120608769			
1; 3; 4	Create a spreadsheet to graph researched data							
3; 4; 5c, 5d; CCSS	Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry	Vanessa Heller	11/21/2015					

Category	Skill (CCSS, ISTE Standards)	Teacher Name	Assignment/ approx. date of activity	Links to Student Work				
1; 2	Script and create a video with stills to tell a digital story, inform, or persuade	Amy Sinnamon Integer Project		Brittany Midiri- Fractions videos with different apps (PPT, iMovie, Stop Motion)		https://drive.google.com/open?id=0Bw1uXTGYInjReEZuM201V0QtlMGc	https://drive.google.com/open?id=0B5FfNcwuZqNCYjM3MUZiLU51aFE	https://drive.google.com/a/opusd.org/file/d/0B-URVe0kdszUYm82NnFaTXdldUU/view?usp=sharing
1 - 4; 5c, 5d; CCSS	Research, create, and present a multimedia presentation to inform and/or persuade, with supporting evidence AND Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.	Amy Sinnamon Integer Projects		Brittany Midiri- Fractions videos with different apps (PPT, iMovie, Stop Motion)		https://drive.google.com/open?id=0Bw1uXTGYInjReEZuM201V0QtlMGc	https://drive.google.com/open?id=0B5FfNcwuZqNCYjM3MUZiLU51aFE	
3; 4; 5c, 5d; CCSS	Access primary and secondary sources using databases, and using a general World Wide Web search applying website-evaluation skills -- in research-based project or presentation							
3; 5c, 5d; CCSS	Use appropriate MLA citations in all multimedia work, and apply copyright knowledge (copyright, fair use, understand copyright infringement and consequences, Creative Commons)							
2, 5a	Post on a blog and/or on a discussion forum, respond to posts							
1	Create a graphic organizer to illustrate a concept	Amy Sinnamon- Look Book Graphic Organizer				https://goo.gl/photos/DTmDpyF4JQeD8nhz8		
4	Pick the appropriate presentation tool (for creator, for audience) possibly including developing criteria for picking	Contact Stella Ranieri (Amy Sinnamon)- Poster Projects at end of the year (contact Amy Later)		Fractions videos with different apps (PPT, iMovie, Stop Motion)		https://drive.google.com/open?id=0Bw1uXTGYInjReEZuM201V0QtlMGc	https://drive.google.com/open?id=0B5FfNcwuZqNCYjM3MUZiLU51aFE	
4; CCSS	Compare and contrast an audio, filmed, staged, or multimedia version, of a text, analyzing each medium's portrayal of the subject. (e.g., how the delivery of the speech affects the impact of the words.).	Jessica Fadgen	Rubric- Hobbit comparing video	https://drive.google.com/a/opusd.org/file/d/0B4WsJZWMPNt9ZVU5NW1pSlVjZDA/view?usp=sh				
6; CCSS	Exhibit Desktop Publishing skills : paragraphs, alignment, tables, columns, insert images, wrap text	Amy Sinnamon- Math Autobiography				https://drive.google.com/a/opusd.org/file/d/0B-URVe0kdszVbHNUTlVUU2ZhRUE/view?usp=sharing	https://docs.google.com/a/opusd.org/document/d/1MTUwZPSM3LFfrElLCw/edit?usp=sharing	https://docs.google.com/a/oakparkusd.org/document/d/1kODUTwuyrwnlYrzDJOhRM5XzN4pLcN9LVmYB66cW_zQ/edit?usp=sharing
1 - 3; 5c, 5d; CCSS	Use technology, including the Internet to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.							
3; 4; 5c, 5d; CCSS	Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.							
3 - 5a, 5b; CCSS	Gather relevant information from multiple print and digital sources, using search terms effectively; access the credibility and accuracy of each sources; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.							

Category	Skill (CCSS, ISTE Standards)	Teacher Name	Assignment/ approx. date of activity	Links to Student Work				
3; 5c, 5d; CCSS	Use appropriate MLA citations in all multimedia work, and apply copyright knowledge (copyright, fair use, understand copyright infringement and consequences, Creative Commons)	Rob Hall		https://docs.google.com/document/d/1IBCZlDqGe_ZYZRud0eW6W3rjUupZ9R1P2lVO3Mqzy2Y/edit	Victor Anderson	American Decade Projects	https://docs.google.com/a/opusd.org/presentation/d/1dmQCAgW0ZXkgu3RHfzVq8YNLvtAaSXDsfKgKoLU9xb/edit?usp=sharing	Multimedia American Decades Project
1; 2; 4; CCSS	Use technology, including the Internet, to produces and publish and update individual or shared writing products in response to ongoing feedback, including new arguments or information.	DJ Cook	DIscussion normative vs. positive economics	https://goo.gl/photos/Kbau1T7qejeB2uXp8	Victor Anderson	DBQ prep interpreting Graphs, speeches, Political Cartoons		
1 - 4; 5c, 5d; CCSS	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject demonstrating understanding of the subject under investigation.	DJ Cook	Economics Lessons/ responses to assignments	https://goo.gl/photos/Kbau1T7qejeB2uXp8	Victor Anderson	American Decade Projects	https://docs.google.com/a/opusd.org/presentation/d/1dmQCAgW0ZXkgu3RHfzVq8YNLvtAaSXDsfKgKoLU9xb/edit?usp=sharing	Multimedia American Decades Project
1 - 5c, 5d; CCSS	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following standard format for citation including footnotes and end notes.	DJ Cook	Students evaluate sources of information (students research opinions of different countries during current events) All encompassing current event Economics recap after AP	https://goo.gl/photos/Kbau1T7qejeB2uXp8				
3; 4; CCSS	Integrate multiple sources of information presented in diverse media or formats (e.g. visually, quantitatively, orally) evaluating the reliability and accuracy of each source and noting any discrepancies among the data.							
1; 4; CCSS	Make strategic use of digital media (e.g. textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.		Debate (March 10)					
3; 4; CCSS	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g. visually, quantitatively, as well as in words) in order to address a question or solve a problem. (CCSS)							
By end of 11-12th Grade	Keyboarding and Word Processing: Ability to create a term paper using editing, formatting, and printing skills; Create a newsletter, brochure, or other template product; Produce resumes and business letters; Merge information between many documents; Demonstrate advanced keyboarding techniques, including the use of keyboard shortcuts, to complete assignments efficiently and accurately; Apply advanced formatting and page layout features when appropriate (e.g., columns, templates, and styles) to improve the appearance of documents and materials; Use editing features appropriately (e.g., track changes, insert comments); Identify the use of word processing and desktop publishing skills in various careers							
	Basic Operations: Ability to identify the platform, properties, and function of computing devices including a							

Appendix B: 2016 Parent Technology Survey Summary Results

OPUSD Parent Survey of Student Technology at Home and 1-to-1 Preferences

Results as of January 27, 2016
Total number of Responses: 727

Question 2: Which grades do your children attend

respondants n=723	Lower Elementary		Upper Elementary		Middle School		High School	
	266	36.8%	170	23.5%	286	39.6%	312	43.2%

Question 3: What devices do your children use at home

respondants n=725		
Desktop	414	57.1%
Laptop	605	**83.4%**
iPad/Tablet	506	**69.8%**
Chromebook	40	5.5%
Student's Smart Phone	398	54.9%
None	11	1.5%
Other	22	3.0%

Question 4: How do you feel about the district's implementation of computing technology

respondants n=717		
Effective Job	507	**70.7%**
Not enoough access/training	98	13.7%
Too much time/money	22	3.1%
Other	90	12.6%

Yes

Question 5: How important is daily access to computing device (1-to-1)

	Lower Elementary		Upper Elementary		Middle School		High School	
Highly Important	57	14.9%	85	23.5%	219	49.3%	278	63.3%
Moderately Important	90	23.6%	145	40.1%	151	34.0%	101	23.0%
Low Importance	135	35.3%	88	24.3%	57	12.8%	42	9.6%
Not Important at all	100	26.2%	44	12.2%	17	3.8%	18	4.1%
respondents n=	382		*362*		*444*		*439*	
Highly & Moderately Important	147	**38.5%**	230	**63.5%**	370	**83.3%**	379	**86.3%**

Question 6: What devices do you have at home you feel comfortable using for BYOD?

	Lower Elementary		Upper Elementary		Middle School		High School	
Laptop	28	9.3%	47	15.8%	127	27.0%	232	42.3%
Chromebook	7	2.3%	12	4.0%	38	8.1%	44	8.0%
iPad/Tablet	97	32.2%	109	36.6%	182	38.6%	187	34.1%
None	169	56.1%	130	43.6%	124	26.3%	86	15.7%
Not Applicable	***57***		***50***		***30***		***25***	
respondents n=	301		298		471		549	
Some device	132	**43.9%**	168	**56.4%**	347	**73.7%**	463	**84.3%**

Question 7: Would you feel comfortable sending a smartphone to school for educational purposes

	Lower Elementary		Upper Elementary		Middle School		High School	
Yes	37	**12.6%**	86	**30.7%**	255	**69.5%**	340	**85.0%**
No	257	87.4%	194	69.3%	112	30.5%	60	15.0%
Not Applicable	***87***		***70***		***27***		***24***	
respondents n=	294		280		367		400	

Question 8: Would you feel comfortable allowing the district to install software security certificates as a condition of using a BYOD program?

respondants n=638		
Yes	400	**62.7%**
No	147	23.0%
Not Applicable	61	9.6%
Other	30	4.7%

Question 9: Willingness to participate in Lease to Own

	Lower Elementary		Upper Elementary		Middle School		High School	
iPads	58	21.6%	70	26.4%	114	27.1%	150	31.3%
Chromebooks	46	17.1%	56	21.1%	105	25.0%	109	22.8%
No	64	23.8%	49	18.5%	72	17.1%	82	17.1%
Unsure	101	37.5%	90	34.0%	129	30.7%	138	28.8%
Not Applicable	***83***		***70***		***53***		***40***	
respondents n=	269		265		420		479	
iPads&Chromebooks	104	**38.7%**	126	**47.5%**	219	**52.1%**	259	**54.1%**
iPads & Chromebooks + unsure		**76.2%**		**81.5%**		**82.9%**		**82.9%**

Question 10: Do you follow the district's social media websites

respondants n=635		
Yes	124	19.5%
Not yet/will do	291	45.8%
Not interested	220	34.6%

65.4% now follow on social media

Question 11: Preference for 1-to-1 implementation

	Lower Elementary		Upper Elementary		Middle School		High School	
BYOD	69	**26.6%**	78	**30.8%**	154	**38.9%**	207	**45.8%**
LTO	47	18.1%	50	19.8%	77	19.4%	82	18.1%
No preference	67	**25.9%**	68	**26.9%**	109	**27.5%**	119	**26.3%**
Cannot Provide	22	8.5%	18	7.1%	25	6.3%	25	5.5%
Not Interested	54	20.8%	39	15.4%	31	7.8%	19	4.2%
Not Applicable	***62***		***50***		***41***		***23***	
Respondents n=	259		253		**396**		**452**	
BYOD + No Preference		**52.5%**		**57.7%**		**66.4%**		**72.1%**
LTO + No Preference		**44.0%**		**46.6%**		**47.0%**		**44.5%**
Some 1 to 1 (BYOD or LTO)		**70.7%**		**77.5%**		**85.9%**		**90.3%**

Appendix C : Teacher Technology Survey Results (Spring 2015)

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2015 Teacher Tech Use Survey Results Overview

Respondents: 94 displayed, 94 total

Status: Open

Launched Date: N/A

Closed Date: 06/21/2014

Display: Display all pages and questions

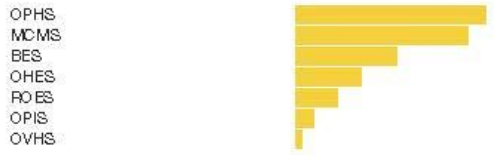
Active Report Filters: None Active.

Manage Filters: 0 filters

Share Results: Disabled

More

1. Site

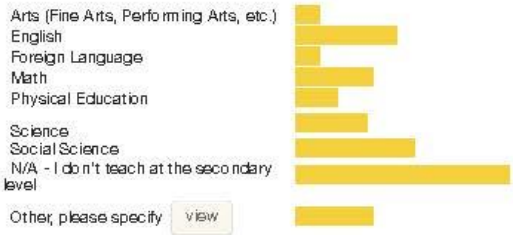


	Response Total	Response Percent
OPHS	30	32%
MCMS	27	29%
BES	16	17%
OHES	10	11%
ROES	7	7%
OPIS	3	3%
OVHS	1	1%
Total Respondents		94

2. Elem Grade

	Response Total	Response Percent
Grades K-1	13	14%
Grades 2-3	15	16%
Grades 4-5	14	15%
N/A - I don't teach at the elementary level	60	64%
Total Respondents		94

3. Secondary Subject



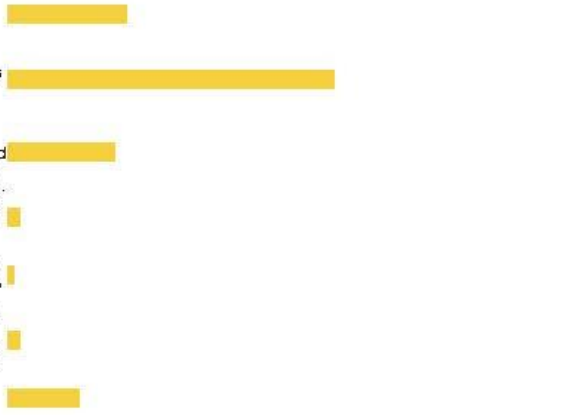
	Response Total	Response Percent
Arts (Fine Arts, Performing Arts, etc.)	4	4%
English	16	17%
Foreign Language	4	4%
Math	12	13%
Physical Education	7	7%
Science	11	12%
Social Science	19	20%
N/A - I don't teach at the secondary level	34	36%
Other, please specify view	12	13%

Total Respondents 94

4. Tech LITE

	Response Total	Response Percent
Yes	5	5%
No	88	95%
Total Respondents	93	
(skipped this question)	1	

5. Attitude



	Response Total	Response Percent
I'm enthusiastic about using technology and many would say that I am on the cutting edge of tech use in the classroom.	19	20%
I use technology in my classroom regularly and feel comfortable with it as long as I am provided training on how to use it.	52	55%
There are a few specific times I use technology throughout the year for particular projects that are best handled through technology but on a more day to day level, I don't incorporate it much.	17	18%
Technology requires too much work to set up and is unreliable, so I only use it occasionally	2	2%
I don't see the point of using technology in my subject area or grade level because what I do currently is fine and technology won't improve on that.	1	1%
Kids have too many distractions from technology as it is, so more in the classroom will only distract them more and won't make them better students.	2	2%
Other, please specify view	11	12%
Total Respondents	94	

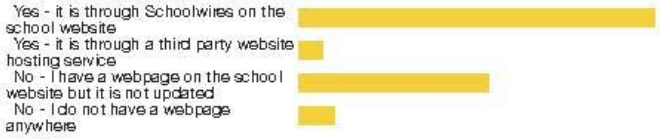
6. Student Devices

	0 devices	1 device	2-3 devices	4-5 devices	7-10 devices	Response Total
Desktop (Mac OS)	84.04% (79)	5.32% (5)	5.32% (5)	0% (0)	5.32% (5)	94
Desktop (Windows)	93.62% (88)	3.19% (3)	1.06% (1)	1.06% (1)	1.06% (1)	94
Laptop (Mac OS)	78.72% (74)	14.89% (14)	1.06% (1)	1.06% (1)	4.26% (4)	94
Laptop (Windows)	92.55% (87)	2.13% (2)	2.13% (2)	0% (0)	3.19% (3)	94
iPads	65.96% (62)	12.77% (12)	0% (0)	0% (0)	21.28% (20)	94
Total Respondents						94

7. Primary STU use

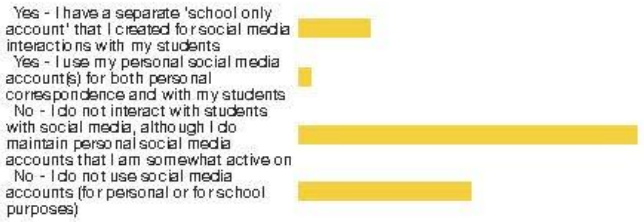
	Response Total	Response Percent
Accelerated Reader	7	7%
Word processing or Internet access	22	23%
IXL Math	2	2%
Finishing computer lab projects	3	3%
N/A - I don't have any student computers in my classroom	52	55%
Other, please specify view	20	21%
Total Respondents	94	

8. Website



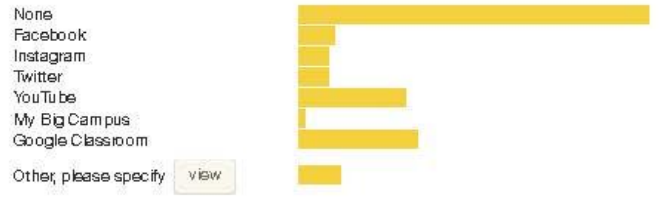
	Response Total	Response Percent
Yes - it is through Schoolwires on the school website	56	60%
Yes - it is through a third party website hosting service	4	4%
No - I have a webpage on the school website but it is not updated	30	32%
No - I do not have a webpage anywhere	6	6%
Total Respondents	94	

9. Social Media



	Response Total	Response Percent
Yes - I have a separate 'school only account' that I created for social media interactions with my students	11	12%
Yes - I use my personal social media account(s) for both personal correspondence and with my students	2	2%
No - I do not interact with students with social media, although I do maintain personal social media accounts that I am somewhat active on	54	57%
No - I do not use social media accounts (for personal or for school purposes)	27	29%
Total Respondents	94	

10. Social Media Tools



	Response Total	Response Percent
None	55	59%
Facebook	6	6%
Instagram	5	5%
Twitter	5	5%
YouTube	17	18%
My Big Campus	1	1%
Google Classroom	19	20%
Other, please specify view	7	7%
Total Respondents	94	

11. Proficiency

	1 - No knowledge	2 - Novice - beginner	3 - Intermediate - use confidently	4 - Expert (can train others)	Response Total
SMARTboards	5.68% (5)	12.5% (11)	59.09% (52)	22.73% (20)	88
Document Cameras	15.91% (14)	25% (22)	45.45% (40)	13.64% (12)	88
Student Responders/Clickers	36.36% (32)	34.09% (30)	17.05% (15)	12.5% (11)	88
Computers On Wheels COWs	19.32% (17)	19.32% (17)	34.09% (30)	27.27% (24)	88
iPads	6.82% (6)	29.55% (26)	51.14% (45)	12.5% (11)	88
Chromebooks	31.82% (28)	32.95% (29)	23.86% (21)	11.36% (10)	88
Google Docs/Google Drive	17.05% (15)	40.91% (36)	31.82% (28)	10.23% (9)	88
Google Classroom	50% (44)	32.95% (29)	13.64% (12)	3.41% (3)	88
Khan Academy - CC Math	54.55% (48)	32.95% (29)	9.09% (8)	3.41% (3)	88
Reflector - iPad projecting	42.05% (37)	37.5% (33)	12.5% (11)	7.95% (7)	88
Doceri - iPad Screencasting	54.55% (48)	27.27% (24)	12.5% (11)	5.68% (5)	88
Using Gmail for Email	23.86% (21)	14.77% (13)	25% (22)	36.36% (32)	88
				Total Respondents	88
				(skipped this question)	6

12. Fav Apps

View responses to this question view

Total Respondents	88
(skipped this question)	6

13. COW Use

	0	1	2-4	5-10	11-20	21+	Response Total
typical week (during non-testing time)	68.18% (60)	11.36% (10)	13.64% (12)	5.68% (5)	1.14% (1)	0% (0)	88
Last month	53.41% (47)	14.77% (13)	13.64% (12)	4.55% (4)	9.09% (8)	4.55% (4)	88
Last quarter	53.41% (47)	6.82% (6)	10.23% (9)	11.36% (10)	4.55% (4)	13.64% (12)	88
Since school started	40.91% (36)	4.55% (4)	15.91% (14)	6.82% (6)	10.23% (9)	21.59% (19)	88

Total Respondents	88
(skipped this question)	6

14. Chromebooks vs COWs

	Response Total	Response Percent
100% of what I use COWs for can be accomplished via Chromebooks	17	19%
75% of what I use COWs for can be accomplished via Chromebooks	14	16%
50% of what I use COWs for can be accomplished via Chromebooks	6	7%
25% of what I use COWs for can be accomplished via Chromebooks	4	5%
0% - Chromebooks will not work as replacements for MacBooks in my use cases	6	7%
N/A - I have not used a COW this year	36	41%
COOL! - I have not used COWs before because I need every student to have a device. If I had access to a Chromebook cart with 36 student devices, I would start using a mobile cart much more frequently for word processing and web browsing/research	8	9%

Total Respondents	88
(skipped this question)	6

15. Frequency

	Daily	2-3 times a week	about once a week	several times a month	once a month or less	never	Response Total
SMARTboards	75% (66)	3.41% (3)	3.41% (3)	2.27% (2)	4.55% (4)	11.36% (10)	88
Document cameras	22.09% (19)	13.95% (12)	3.49% (3)	5.81% (5)	17.44% (15)	37.21% (32)	86
Student Responders/Clickers	5.75% (5)	4.6% (4)	4.6% (4)	11.49% (10)	10.34% (9)	63.22% (55)	87
COWs (MacBooks on carts)	3.45% (3)	11.49% (10)	12.64% (11)	9.2% (8)	25.29% (22)	37.93% (33)	87
Teacher iPad	20.45% (18)	9.09% (8)	7.95% (7)	12.5% (11)	22.73% (20)	27.27% (24)	88
Student iPads (Learning center/cart)	10.23% (9)	10.23% (9)	5.68% (5)	7.95% (7)	7.95% (7)	57.95% (51)	88
Chromebooks	3.57% (3)	8.33% (7)	7.14% (6)	3.57% (3)	13.1% (11)	64.29% (54)	84
Google Docs (student use)	5.68% (5)	9.09% (8)	9.09% (8)	7.95% (7)	15.91% (14)	52.27% (46)	88
Google Classroom	5.68% (5)	2.27% (2)	1.14% (1)	4.55% (4)	15.91% (14)	70.45% (62)	88
Khan Academy (Common Core Math)	3.45% (3)	2.3% (2)	0% (0)	2.3% (2)	8.05% (7)	83.91% (73)	87

Total Respondents	88
(skipped this question)	6

16. Tech Interest

	1 - No interest/can't see the need now or in the future	2 - Low interest/perhaps in a year or two from now	3 - Moderate interest/put me toward the back of the line	4 - Substantial interest/put me toward the front of the line	5 - High interest/ASAP	0 - Already have this, no need for more	Response Total
--Mobile Learning Center of 8-10 iPads SHARED with grade level/department	36.36% (32)	7.95% (7)	14.77% (13)	14.77% (13)	10.23% (9)	15.91% (14)	88
--Learning Center of 8-10 iPads resident in my classroom NOT SHARED	28.41% (25)	6.82% (6)	12.5% (11)	13.64% (12)	31.82% (28)	6.82% (6)	88
--Mobile Cart of 36 iPads SHARED with grade level/department	30.68% (27)	12.5% (11)	15.91% (14)	15.91% (14)	21.59% (19)	3.41% (3)	88
--Cart of 24-36 iPads resident in my classroom NOT SHARED	29.55% (26)	9.09% (8)	15.91% (14)	11.36% (10)	27.27% (24)	6.82% (6)	88

--Mobile cart of 36 Chromebooks SHARED with grade level/department	32.95% (29)	12.5% (11)	11.36% (10)	12.5% (11)	28.41% (25)	2.27% (2)	88
--One additional iMac or MacBook for student use in my classroom	39.77% (35)	6.82% (6)	15.91% (14)	13.64% (12)	20.45% (18)	3.41% (3)	88
						Total Respondents	88
						(skipped this question)	6

17. Name

View responses to this question view

Total Respondents 47
(skipped this question) 47

18. Training Access

	Response Total	Response Percent
I don't have the desire or need to attend any technology trainings	6	7%
There are not enough technology trainings offered and I wish the district would offer many more	6	7%
The district technology trainings seem interesting but I have not been able to attend due to scheduling conflicts	18	21%
District training opportunities are adequate, and I have attended some of them.	51	61%
Other, please specify view	8	10%
Total Respondents	84	
(skipped this question)	10	

19. Training Time

	1 - No interest (never)	2 - moderate interest (some times)	3 - high interest (best time for me)	Response Total
Before school	79.76% (67)	14.29% (12)	5.95% (5)	84
During lunch	57.14% (48)	30.95% (26)	11.9% (10)	84
During prep period	46.43% (39)	41.67% (35)	11.9% (10)	84
After school	17.86% (15)	48.81% (41)	33.33% (28)	84
Saturday	79.76% (67)	13.1% (11)	7.14% (6)	84
During Summer time	16.67% (14)	34.52% (29)	48.81% (41)	84
			Total Respondents	84
			(skipped this question)	10

20. Prof Dev Topics

	Already Proficient	1 - No interest	2 - Low interest	3 - Moderate interest	4 - High interest	Response Total
--SMARTboards	53.57% (45)	8.33% (7)	17.86% (15)	15.48% (13)	4.76% (4)	84
--Basic iPad use	45.24% (38)	10.71% (9)	19.05% (16)	19.05% (16)	5.95% (5)	84
--Finding iPad Apps for instructional use	21.43% (18)	9.52% (8)	16.67% (14)	34.52% (29)	17.86% (15)	84
--Managing a set of iPads (app deployment, remote control of iPad via app locking, etc.)	8.33% (7)	15.48% (13)	21.43% (18)	28.57% (24)	26.19% (22)	84
--Student use of Google Apps (Google Docs, Sheets, Slides/Presentations, Google Drive, etc.)	21.43% (18)	17.86% (15)	14.29% (12)	23.81% (20)	22.62% (19)	84
--Using Schoolwires to create and/or maintain a webpage	41.67% (35)	15.48% (13)	21.43% (18)	13.1% (11)	8.33% (7)	84
--Using Google Classroom for online discussions and/or distributing/collecting assignments	14.29% (12)	25% (21)	13.1% (11)	22.62% (19)	25% (21)	84
--Khan Academy for Common Core Math	17.86% (15)	46.43% (39)	9.52% (8)	11.9% (10)	14.29% (12)	84
--Using Doceri on iPad to control & record your laptop/SMARTboard and posting video to YouTube	19.05% (16)	22.62% (19)	20.24% (17)	25% (21)	13.1% (11)	84
					Total Respondents	84

(skipped this question)	10

21. Rate your interest in having an instructional technology specialist come into your classroom and assist you with each of the following

	1 - No interest	2 - Low interest	3 - Moderate interest	4 - High interest (ASAP)	Response Total
--Lesson Design - planning a technology infused lesson	39.29% (33)	20.24% (17)	29.76% (25)	10.71% (9)	84
--Lesson Modeling - "let me watch you teach a lesson using a particular technology"	44.05% (37)	23.81% (20)	22.62% (19)	9.52% (8)	84
--Lesson Backup - "be on hand to assist as I teach a lesson using tech for the first time"	47.62% (40)	26.19% (22)	15.48% (13)	10.71% (9)	84
--Lesson Feedback - "watch me and give me feedback on how to do it better/more effectively"	44.05% (37)	39.29% (33)	11.9% (10)	4.76% (4)	84
--Coverage - watch my class for me as I watch a colleague teach a lesson with tech	40.48% (34)	15.48% (13)	35.71% (30)	8.33% (7)	84
				Total Respondents	84
				(skipped this question)	10

22. ITS Help Name

View responses to this question	view
Total Respondents	18
(skipped this question)	76

23. TechTOSA usage

	Response Total	Response Percent
5 or more times	7	9%
3-4 times	23	28%
2 times	13	16%
1 time	16	20%
never	23	28%
Total Respondents	82	
(skipped this question)	12	

24. TechTOSA Comments

View responses to this question	view
Total Respondents	48
(skipped this question)	46

25. Tech Requests

	Response Total	Response Percent
Send an email to a Tech Support staff	12	14%
Contact my site TechLITE	17	20%
Call the district tech department	0	0%
Submit a Tech Support Help Desk Ticket	68	82%
Total Respondents	83	
(skipped this question)	11	

26. Tech Staff levels

	Response Total	Response Percent

The Tech Support team appears adequately staffed. I receive support in a timely fashion.	59	71%
The Tech Support team is moderately understaffed. I wait a fair amount of time to have my tech support needs addressed and it sometimes impacts instruction.	20	24%
The Tech Support team is severely understaffed. The equipment and/or infrastructure are not maintained as needed for reliable service and I wait too long for tech issues to be resolved, frequently impacting instruction.	4	5%
Total Respondents	83	
(skipped this question)	11	

27. Highlights

View responses to this question view

Total Respondents 83
(skipped this question) 11

28. Feedback

View responses to this question view

Total Respondents 39
(skipped this question) 55