Technology Plan 2015-2019	*Quality Learning* *Every Day in* *Every Classroom* *for Every Child*

Introduction

Vision

The Tahoma School District recognizes that technology is a driving force for change in how people communicate and acquire knowledge in a rapidly changing world. Today, technology is an essential tool that allows our students and staff opportunities to communicate, collaborate and create content as a community of learners to ensure that all students graduate with the knowledge and skills necessary to live, learn and work in the 21st Century. In our vision to support student learning, students, staff, parents, and the community work together to provide the tools and experiences every student needs to create an individual, viable and valued path to lifelong personal success.

This vision is supported by our long-standing commitment to our District Outcomes and Indicators. For over twenty years these outcomes have been a driver in our instructional design. We believe that technology integration allows students to achieve the Outcomes and Indicators in new ways. Using technology, new collaboration can be realized with a wide audience both in and out of the classroom, complex thinkers are challenged in new ways with access to unprecedented quantities

> **Tahoma School District Outcomes and Indicators**
> Self-Directed Learner
> Collaborative Worker
> Effective Communicator
> Quality Producer
> Complex Thinker

of information and new tools allow students to produce evidence of their learning in sophisticated presentations.

To this end, we must strive to provide digitally rich and relevant experiences for our students. Researcher and author Michael Fullan, noted for his work in systemic educational change and the influence of school leadership on student success, suggests there are four criteria for integrating technology and how we teach to produce exciting, innovative learning experiences for all students. These new experiences must be:
  - Irresistibly engaging for students and teachers
  - Elegantly efficient and easy to use
  - Technologically ubiquitous 24/7
  - Steeped in real life problem solving

To realize student experiences that meet these aims, we must provide learning environments that are globally connected, present multiple opportunities for authentic collaboration, communication, and creativity we must ensure easy access to appropriate tools, well developed curriculum aligned to standards and skilled teachers well supported to implement new strategies.

Where we are

Over the last eight years, we have worked to develop learning environments that use technology to engage students and provide new learning experiences. Our progress is the result of the integration of technology through curricular changes, professional development, technology lessons, and a solid infrastructure that allows over 5,000 student devices to access productivity tools (such as the Microsoft Office suite) and high speed internet access. We have made great gains in moving from one computer lab per school in 2004 to where we are today..

Curriculum
- The TSD K-5 Scope and Sequence of technology skills is complete.
- The K-5 Scope and Sequence lessons are in use and being incorporated into curriculum.
- Online safety and cyberbullying prevention lessons are in place at a variety of grade levels.
- Technology integration into the curriculum is ongoing, with emphasis in the core content areas of Language Arts and Social Studies.

- Staff professional development in effective use of technology with students is ongoing at all grade levels.

- Investigation and adoption of digital resources including textbooks.

Support
- Staff professional development is in place for use of productivity software.
- Staff professional development is in place for use of software with students.
- Two instructional technology coaches, one elementary and one secondary, work with teachers and students integrating technology into instruction.
- Each elementary grade level has a technology teacher leader to assist with professional development, "how to" questions and integration of technology into curriculum and instruction.
- Secondary schools have designated technology teacher leaders for tech help, teacher web site work and Skyward training.
- Technology Operation department supports all technology tools and maintains infrastructure and supports all technology tools with positions assigned to each building.

Hardware tools
- Over 5,000 computing devices for K-12 student use.
- Multiple mobile computers carts at every school (2:1 student to computer ratio).
- Wireless access available in all classrooms and learning spaces for classroom sets of devices.
- Instructional stations that include an LCD projector, document camera and computer are present in all learning spaces.
- Grades 1, 2 and 3 classrooms have 6 laptops/netbooks plus access to mobile computer carts.
- Kindergarten classes have 6 iPads plus access to mobile computer carts.
- Up-to-date infrastructure with virtualized servers running Microsoft Server 2012 on.
- High speed Internet access available on all computing devices.
- High speed fiber connections between schools and to the internet.
- Internet content filter with varying degrees of filtering depending on grade level.
- All certificated staff have laptops for mobile access and productivity.

- VoIP (Voice over IP/internet) phone system in place.
- BYOD (Bring Your Own Device) is allowed grades 8-12.

Software Tools
- Office 2010 including Word, PowerPoint, Excel, Outlook, One Note, Lync.
- Internet Explorer and Chrome web browsers available for staff and students.
- Tahoma School District is now a Google Apps for Education district. These apps are used for collaboration, creative projects and communication grades 5-12.
- Discovery Education subscription for access to digital content (video).
- Assistive software such as Read Outloud and CoWriter for assisting students with reading or writing difficulties.

Elementary only
- Raz-Kids reading software at grades K- 3.
- Type to Learn keyboarding software for grades 2-5.
- Think Central as part of the K-5 math curriculum.
- Pixie for presentations including audio and photos.
- Starfall/More Starfall for K-3 reading and math skills.

Where we are going

Equity of Access for Students
We must ensure students have sufficient and equitable access to technology tools to take advantage of opportunities to acquire the knowledge and skills needed to become college and career ready. At school, we must provide learning environments in which this is the norm, not the exception. Our curriculum continues to adapt to new requirements and new standards.

To best meet these new requirements and our own District Outcomes increasing access to technology for resources, information, productivity and collaboration is essential. As we make changes in the curriculum and expectations we are moving toward all staff needing to be well prepared to use technology as an integral part of their instruction and both teachers and students needing access to technology outside the school day.

At home, we expect homework to be a meaningful extension of the classroom.   To meet the increasing demand for access outside of school, students with family circumstances where it is difficult to provide home access to a computer will be will be provided a checked-out device through a district refurbishment program of older computers. Investigating and implementing solutions for students without home access to the internet will be ongoing. This includes access to district technology after school hours.

To this end, the district will:
- Provide learning environments that are globally connected and include opportunities for collaboration, communication, and creativity and engage in real life problem solving as supported by our Outcomes and Indicators.
- Support high access, ensuring students have tools that support learning both inside and outside of school.
- Revise and author curriculum and classroom experiences that integrate technology tools to enhance engagement and meet learning goals.

- Design, implement, and assess a professional development program that provides learning for all teachers, both in person and online, to effectively use technology tools to support learning.
- Provide professional development opportunities in the use of assessment software and assessment data to inform and differentiate instruction.
- Acknowledge that the use of technology tools, both hardware and software, should not emphasize particular devices or applications, but instead emphasize gaining the knowledge and transferable skills necessary to use technology tools now and in the future.
- Continue to provide computing devices in a manner that allows access as needed.
- Assist student with difficult or no access to technology at home with solutions that provide needed access through the refurbishment of end-of-life district technology tools (ex: laptops)
- Maintain existing technology infrastructure and update it as needed to provide access for students and staff to meet their learning and work goals.
- Actively investigate and trial new technology tools that are easy to use, efficient, integrate and support the achievement of district learning goals.
- Annually review the technology plan and revise as necessary to reflect advances in technology, changes in curricular needs and teaching strategies.
- Establish effective communication structures with staff and community to ensure continued support of technology levies necessary for successful implementation of the district's technology plan.

Curriculum and Instruction

Vision

Curriculum and instruction in the Tahoma School District is shaped and guided by the District's Classroom 10 initiative. In Classroom 10, curriculum is designed to support students in meeting state standards and in attaining the 21st Century skills described in our Tahoma District Outcomes and Indicators including thinking skills and Habits of Mind.

> **Classroom 10**
> Classroom 10 describes the curriculum and instruction model for the Tahoma School District. Foundational to this curriculum and instruction model is a belief that the core content in each discipline provides a vehicle

Recently, our district and community has clarified that aspiration as "Future Ready" ensuring that all students graduate with the knowledge and skills necessary to live, learn and work in the 21st Century.   We believe it is our responsibility to create systems and structures that result in students, staff, parents, and community working together to provide the tools and experiences every student needs to create an individual, viable and valued path to lifelong personal success.

Learning targets determine when and how technology is used. Technology is never invested in solely for it's own sake, instead it is leveraged and prioritized to
   • Help students meet learning goals aligned to district and state standards
   • Provide access to up-to-date enhanced resources aligned to district curriculum
   • Support differentiation, that is, modifying curriculum for different learner abilities.

In particular, digital resources, devices, and tools will be strategically and intentionally used to support and accelerate four priority targets to ensure students have the knowledge, skills, and tools they need "to create an individual, viable and valued path to lifelong personal success." These priority targets are:
   • Meeting the Common Core State Standards in ELA Literacy and Math and the Next Generation Science Standards.
   • Real, purposeful, and effective collaboration (within and outside of the classroom and school).
   • Personalized and flexible learning options for students that promote self-direction and ownership of the learning.
   • Real-world rich learning tasks that require creativity, communication, research, and collaboration.

Where we are

Over the past several years, we have begun implementation of lessons in grades K-5 in order to introduce and develop proficiency in technology skills. Lessons around safety and security, digital citizenship, cyberbullying and research and information literacy are being implemented--both systemically as part of the curriculum and episodically (e.g. during an assembly, etc.).

The Common Core English Language Arts (ELA) standards, especially those around research, will guide a systematic approach to integration in the core content areas of Language Arts, Social Studies and Science. The Next Generation Science Standards will also provide guidance for technology integration in this subject area.

In both elementary and secondary units that have been recently adopted or revised, technology has been integrated to support learning and student acquisition of technology skills. Additionally, many teachers have optimized technology use in their classroom by choice while others have not, resulting in some inconsistent use and experiences systemically.

> **Common Core State Standards**
> A real-world approach to learning and teaching that require a practical, real-life application of knowledge to prepare students for success in college, work and life. These K-12 learning standards go deeper into key concepts in math and English language arts.

Google Apps for Education (GoTahoma) is available for use in grades 4-12; however, the degree of use varies from classroom to classroom and department to department. Some classroom teachers have seized the opportunity and are using GoTahoma to be nearly paperless in their classrooms; some departments (THS Health & Fitness, for example) have leveraged the tools to create ePortfolios for their students; and, yet, in other classrooms, use is incidental if at all.

Where we are going

Below you will find the specific strategies, projects, and goals for the next four years for each targeted area.

- **Meeting the Common Core State Standards in ELA Literacy and Math**
  - Create authentic opportunities for students to learn and achieve the targeted Common Core standards:
    - Reading 7: *Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.*
    - Writing 6: *Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.*
    - Writing 8: *Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.*
    - Speaking and Listening 2: *Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.*
    - Speaking and Listening 5: *Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.*
    - Math Practice 4: *Model with mathematics*
    - Math Practice 5: *Use appropriate tools strategically*

- **Real, purposeful, and effective collaboration (within and outside of the classroom and school)**
    - Audit K-12 core curriculum for authentic collaboration—where it currently exists and where it could be embedded to enhance learning.
    - Identify existing authentic collaboration opportunities K-12 within our curriculum; revise and enhance as necessary to match 21st Century collaboration tools and strategies.
    - Identify potential NEW authentic collaboration opportunities K-12 within our curriculum; develop lessons and activities to embed 21st Century collaboration tools and strategies.
    - Continued leveraging of GoTahoma for collaborative projects 4-12.
    - Identify and implement cross-grade level and cross-school collaboration opportunities.
    - Explore opening of social media tools for high school student collaboration.

- **Personalized and flexible learning options for students that promote self-direction and ownership of the learning**
    - Develop an ePortfolio tool for students with their parents to collect and display a student's ability related to the District Outcomes and Indicators.
    - Leverage technology for differentiation of instruction though use of alternative resources, student choice and alternative assignments.
    - Develop and offer a menu of student-choice, self-directed, online learning options for secondary students. (E.g. Personal finance, etc.)
    - Develop and offer "blended" versions of classes beginning at the high school level.
    - Explore, develop, pilot a Google-like "20% Time" class for students—potentially as part of one of the high school academies.
    - Leverage communication technologies that allow student to participate when not in the classroom.
    - Support and expand "flipping" initiatives wherein instruction occurs outside the classroom through the use of video communications tools and the classroom becomes a center for more personalized learning, guidance and student interactions.

- **Real-world rich learning tasks that require creativity, communication, research, and collaboration**
    - Expand 10th Grade Zine project to encompass all secondary readers and writers in the district (online magazine).
    - Explore, develop, pilot a Google-like "20% Time" class for students—potentially as part of one of the high school academies.
    - Prioritize the exploration, development and piloting of projects, course content and entire courses that acknowledge creativity, communication, research, and collaboration are the new cornerstones for learning.

Implications for the Technology Plan

There are significant implications for technology tools and devices, curriculum and professional development if we are to ensure all students leave our system with the knowledge, skills and habits needed to move confidently into post high school learning or work.

We have made huge improvements in student access to technology tools and devices in our school. We must now extend access outside the classroom and outside the school day.

While we have made significant strides in supporting technology learning for our staff, an increased investment in professional development time will be critically important to take the next steps in introducing relevant and engaging curriculum and incorporating instructional practices that bring alive the learning we want for each one of our students.

Implications for Tools and Devices
- Home access for all secondary students (grades 6-12) by taking advantage of existing resources students have and supplementing with checked out devices for those students/families with financial need.
- 1:1 access in school for all secondary LA, Science, and Social Studies classes.
- Continue to support a Learning Management System to host flexible/self-directed/blended learning options.

Implications for Professional Development
- Systemic, ongoing professional development opportunities for all levels of learners.
- Increase the opportunities for just-in-time training and on-going support for new and existing project.
- Annual review of offerings, time allocated and people available for training.

Staff Professional Development

Vision

Professional development related to technology use is focused and prioritized in these areas:
- Just-in-time training for teachers using technology tools to meet student learning goals as specified in district curriculum or initiatives.
- Training that promotes best practices, effective, productive, and efficacious use for staff and students.
- Differentiation of technology training in technology tools
- Differentiation of training in both curriculum based and spontaneous technology use with students
- Day-to-day school-level support as needed.

Where we are

Below is a sampling of current approaches used to meet the three support priorities.
- Just-in-time training for teachers using technology tools to meet student learning goals as specified in district curriculum or initiatives.
  - Required sub-release days for departments or grade levels prior to implementing a new technology rich project.
  - Optional/invitational sub-release days for teachers seeking increased knowledge or skills related to integrating and supporting technology use in their classroom.
  - Summer Technology and Learning Conference (3-4 day conference at the end of June for teachers and staff).
- Training that promotes best practices, effective, productive, and efficacious use for staff and students.
  - Summer Technology and Learning Conference (3-4 day conference at the end of June for teachers and staff)
  - August technology training days (3-6 ½ day sessions in tool use)
  - F1 Tuesdays--periodic quick tips and tricks for teachers and staff.
  - Short, after-school invitational/optional trainings for teachers and staff on topics ranging from Google forms in the classroom to managing your Outlook Inbox
- Day-to-day school-level support as needed.
- Designated technology teacher leaders (10Tech Teacher Leaders) in each building available to help teachers as needed.

Where we are going

- We must prioritize regular review and revision of professional development plans based on changes in curriculum, technology tools and student learning goals. Suggested enhancements may include:
  - More virtual opportunities for staff to learn/get support.
  - Leverage social media (example: Google+ Hangouts or Microsoft Lync) to deliver professional development and interact with teachers and staff.

- o Additional use of sub release time for major initiatives.
- o Include opportunities afforded by the district early release schedule.
- Annually review and revise, as needed, the numbers and roles of professional development personnel, i.e. Instructional Coaches. Tech Summit and 10 Tech Teacher Leaders to ensure maximizing use of resources in meeting prioritized support needs.

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10 Tech Teacher Leader Team

Classroom 10 Technology Teacher leaders (10Tech Teacher Leader) are classroom teachers who work with the Instructional technology Coaches to help teachers in implementing best technology practices and technology use in the classroom.
These 10Tech Teacher Leaders support district technology integration efforts through trainings and on-site assistance to building and teams. 10Tech Teacher Leaders collaboratively plan and implement a training schedule to meet building and district goals with T&L Technology staff. 10Tech Teacher Leaders may also participate in district level R&D

Technology Summit

The Technology Summit is composed of one designated 10Tech Teacher Leader from each school, representatives from Teaching and Learning, Technology Operations, school administration and Special Education. The Instructional Technology coordinator is responsible for facilitating this committee.

The Technology Summit one of the decision making committees that is responsible for feedback and input to determine:
- Annual spending priorities for the technology levy to meet technology plan goals.
- Annual revision and recommendation of the district Technology Plan.
- Revision and recommendation of a four year Tech Plan that coincides with the four-year cycle of the voter approved Technology Levy.
- All Tech Plan and Tech Levy recommendations go to the Technology Advisory Committee for review, revision and recommendation to the School Board for final approval.

	2015-19	
Technology Summit	**One position per school** (8 Tech Summit) $1500 * 8 building = $12,000 per year Benefits: $12,000 x 30%= $3,600 Annual Cost: $15,600	$62,400
	Tech Summit Meetings: Monthly Meetings- 2 hours after school 　　2 release day meetings/year * 8 Tech Summit * $160 per substitute teacher = $2500	$10,000

Elementary 10 Tech Teacher Leader Team

This position supports district technology integration efforts through trainings and on-site assistance to building and teams.   10Tech Teacher Leaders collaboratively plan and implement a training schedule to meet building and district goals with T&L Technology staff. 10Tech Teacher Leaders may also participate in district level R&D.

	2015-19	
Elementary TTTL Positions	Up to 24 grade level positions (24 TTTL) $500 stipend x 6 grade levels x 4 buildings = $12,000 per year 1 Skyward (Standards based grading, data, assessment)(4TTTL) $500 stipend x 4 buildings = $2000 Total Benefits: $14,000 x 30%= $4,200 Annual Cost: $18,200	$72,800
	Training / Collaborative Work Time During Year: 2 hr. meetings * 24 TTTL x 6 per year x $55 per diem = $15,840 annually Benefits: .3 x $15,840= $4752 Annual Cost: $21,000	$84,000

Secondary 10 Tech Teacher Leaders

The position provides on-site school support of Software (Tech), Skyward, Google Apps

Tech Support TTTL
Support teachers with the use of the Microsoft products and integration of a variety of technologies in the classroom.

Project TTTL: Used as needed. Assigned to a subject area project that integrates technology into the curriculum or as a tech advisor to a unit being authored or revised by Teaching & Learning. Project TTTLs may also participate in district level R&D.

	2015-19	
Tech Support TTTL	**Annual Cost** 1 Tech Support TTTL at CRMS, TMS 2 Tech Support TTTLs at THS & TJH (as needed) 1 Skyward/Homeroom Support TTTL at CRMS, TMS, TJH 2 Skyward/Homeroom Support TTTls at THS (as needed) 1 Google Apps Support per school 15 X $500 = $7,500 Benefits: 30% x $7,500= $2,100 Annual Cost: $9,600	$38,400

Instructional Support for Classroom 10 & Common Core Aligned Curriculum Implementation					
TTTL's and Instructional Technology Coaches will provide specialized training and support as new curriculum tools are implemented. This will be on an as-needed basis and determined by Teaching & Learning, the 10Tech Teacher Leaders and principals.					
Teacher Training and Support	**2015-16**	**2016-17**	**2017-18**	**2018-19**	
Basis for estimate- Release time: 250 release days (250 x $160)= $40,000 Per diem: 180 hours x $50/hr=$9,000 Reviewed annually.	$49,000	$49,000	$49,000	$49,000	$196,000

Other Training Options	**2015-16**	**2016-17**	**2017-18**	**2018-19**	
Flexible Learning Professional development to support the use of technology tools that allow incorporating flexible learning options for students.	$10,000	$10,000	$10,000	$10,000	$40,000
Summer 10Tech Conference & Back to School training 4 day Summer tech institute offered after school dismisses in June 2 days of optional staff training in August for Skyward, SWIFT, GoTahoma Staff can earn clock hours for time in attendance. *Conference presenter: $75/hr +Benefits= $100/hr* *Presenters up to 80 hours= $8,000* *Conference materials/supplies $1000*	$9,000	$9,000	$9,000	$9,000	$36,000
Conferences Attendance at conferences based on identified needs. **Annually** NCCE Northwest Tech Conference Google in the Classroom	$13,000	$18,000	$13,000	$18,000	$62,000

Bi-Annually NECC (National Level)					
Video Library In-house videographer to video and edit teacher sourced video resources.	$8,000	$8,000	$8,000	$8,000	$32,000

Instructional Technology Coordinator and Coaches Provide leadership and support for professional development, curriculum development, implementation of best instructional practices, research and development, and evaluation of potential solutions that will meet teaching and learning needs for students and staff.					
	2015-16	**2016-17**	**2017-18**	**2018-19**	
2 Instructional Coaches 1 Instructional Tech Coordinator /Coach Salary, CR days, benefits	$275,000	$283,500	$292,000	$301,000	$1,151,500

Staff Professional Development Totals					
	2015-16	**2016-17**	**2017-18**	**2018-19**	
	$430,960	$444,460	$447,960	$461,960	$1,785,340

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Information Management and Evaluation

Vision

Tahoma School District strives for improved, systemic means to gather and evaluate information for data-driven decision making. Accountability considers the alignment between goals, assessments, and results. To effectively hold ourselves accountable to our district outcomes, we must have clearly articulated, measurable goals with identified data points and targets on the front end.

Decision-making must be consistently informed by data, research, and results. Once decisions have been made, they must then be communicated to all stakeholders in the system being transparent in providing a summary of the data, research, and results that guided the decision-making.

Where we are

The collection, integration and ability to share data with multiple audiences is an ongoing challenge for all school districts. As the amount of data increases the usefulness of that data to multiple audiences is undermined by limited capacity to make the resulting information accessible in a timely way. This increase in data can be directly tied to the increasing number of student assessments. Annually, state-mandated online Common Core Assessments will be administered in grades 3-10, as will End of Course assessments at the high school level. Additionally, there are over 150 standards based district assessments and additional classroom-based and other common assessments dependent on grade level and subject. All of these aforementioned assessments are all administered online. Our high student access to computers allows us to perform these online assessments for an entire grade levels.

Assessment data is collected and visually displayed for teachers and administrators through the web-based program Homeroom, hosted by School Data Solutions. Data collected is used to differentiate instruction and measure student growth for the Teacher Principal Evaluation system (TPEP) and used on an annual basis to monitor systems level work.

Where we are going

Technology provides powerful data collection, processing and display tools which allows the district to share and display information for timely decision making and action. Continued use of programs designed to aggregate and display data is integral to the successful use of data in decision-making and evaluation. Students may also access data to reflect on progress and determine current and future course of action relevant to his/her own learning. As programs such as Homeroom and Classroom evolve, we must remain flexible in our thinking to take advantage of these programs.

Students in grades 3-10 will be taking state-mandated Common Core assessments and End of Course tests. Our continued high student access to computers will continue to allow us to administer online assessments for entire grade levels

Program Evaluation:
Program evaluation is a formalized approach to studying the goals, processes, and impacts of projects, policies and programs. Measurement of progress toward goals associated with Classroom 10, best practices and alignment with Common Core will help to determine which programs and practices are having the greatest impact on instructional practice and student learning.

All major initiatives will have an evaluation component with success indicators and benchmark points determined during planning and work plan development.

Technology Usage	2015-16	2016-17	2017-18	2018-19	
Data Collection	$5,000	$5,000	$5,000	$5,000	$20,000
Program evaluations- outside consultants.	$15,000	$15,000	$15,000	$15,000	$60,000

Integrated Data Systems:
The focus now is on Assessment for Learning. This requires assessment data accessible to teachers and administrators to inform next steps in instruction and interventions. Homeroom, a web based program accessible to all staff, is designed to make data available in a timely way using graphical displays that teachers and administrators can easily access to help indecision-making.

	2015-16	2016-17	2017-18	2018-19	
Student Data Management: School Data Solutions/ Homeroom	$25,000	$25,000	$25,000	$25,000	$100,000
Data Base Administrator- to manage student information systems and enterprise data management.	$52,000	$53,000	$54,000	$55,000	$214,000
Student Assessment - School Data Solutions/ Classroom	$25,000	$25,000	$25,000	$25,000	$100,000
Skyward Data Manager: Increased salary based on systems integration required with additional tech systems added from technology integration.	$20,000	$20,000	$21,000	$22,000	$83,000

SharePoint Expansion: For curriculum library

	2015-16	2016-17	2017-18	2018-19	
Outside services/ consultant fees	$10,000		$10,000		$20,000

Tahoma School District Website

	2015-16	2016-17	2017-18	2018-19	
Annual Cost	$4,000	$4,000	$4,000	$4,000	$16,000

Information Management and Evaluation Totals

	2015-16	2016-17	2017-18	2018-19	
	$156,000	$147,000	$159,000	$151,000	$613,000

Learning Environment- Staff and Building

Vision

Tahoma School District acknowledges that our learning environments must be globally connected and provide opportunities for collaboration, communication, and creativity. Teachers and staff require technology tools that make this learning environment possible.

Where we are

Teacher workstations have been provided for every teaching space including libraries. The workstations consist of a computer, LCD projector and a document camera. These aid in the visualization of learning through presentation software, video and audio information from a variety of sources including online resources, sharing of student work and other resources.

Other equipment necessary for staff use is included in this section of the technology plan as outlined below.

Where we are going

Staff equipment will be added or replaced as outlined in this section of the technology plan. The chosen technology tools, both hardware and software, will not emphasize particular devices or applications, but instead are chosen based on the educational need of the targeted user and technology available at the time.

Costs are estimates based on anticipated numbers of classrooms and students and current pricing. Annually, a technology spending plan is presented to the School board for approval in the springtime to provide more detail based on the then current educational needs and pricing.

As student work becomes more collaborative, there will be the need for more flexible workspaces for students. The concept of access to a Learning Commons for student may result in the transformation of libraries (or other spaces) for this purpose.

Classroom workstations:
- All classrooms have a computer device that remains in the classroom at all times.
- All classrooms have wall mounted interactive projectors.
- Secondary math classrooms (including Special Education) have wall mounted interactive projectors with ActivInspire.
- All classrooms have updated document cameras.
- Single sign-on for variety of applications and web resources.

	2015-16	2016-17	2017-18	2018-19	
Certificated laptops- non-classroom employees (130 x $700)			$45,500	$45,500	$91,000
Certificated laptops- classroom teachers (350 x $700)		$122,500	$122,500		$245,000
Classroom devices- stays in classroom (350 x $700)			$122,500	$122,500	$245,000
Elementary LCD projector refresh	$50,000	$50,000			$100,000
Secondary LCD projector refresh	$70,000	$70,000			$140,000
Secondary math ActivBoards refresh		$76,800	$38,400	$38,400	$153,600
Document Camera refresh - $250 each x 350 classrooms	$40,000	$47,500			$87,500

Other Tools: Tools added over time to provide time for staff to learn to effectively implement and allow for changes as technology advances.

	2015-16	2016-17	2017-18	2018-19	
Network printers	$15,000	$15,000	$15,000	$15,000	$60,000
Peripherals (cameras, camcorders)	$10,000	$10,000	$10,000	$10,000	$40,000
Classified desktops			$40,000		$40,000
Tablet refresh- Administrators	$20,000				$20,000
Bulbs and batteries- projectors and devices	$1,000	$1,000	$5,000	$5,000	$12,000

Stop Loss:
School allocated incentive funds for replacement of damaged or stolen equipment. Any funds not spent may be spent by schools on technology tools.

Stop/Loss	2015-16	2016-17	2017-18	2018-19	
	$16,000	$16,000	$16,000	$16,000	$64,000

Garage:
For the purchase of new, non-standard technology tools for research as to possible future use.

Garage	2015-16	2016-17	2017-18	2018-19	
	$15,000	$15,000	$15,000	$15,000	$60,000

Learning Environment-Staff and Building Totals

	2015-16	2016-17	2017-18	2018-19	
	$240,750	$460,050	$389,900	$267,400	$1,358,100

Learning Environment- Student Tools and Access

Vision

Tahoma School District recognizes that the use of technology tools, both hardware and software, should not emphasize any particular device or application, but instead emphasize gaining the knowledge and transferable skills necessary to use technology tools now and in the future.

We recognize that our learning environments must be globally connected and provide opportunities for collaboration, communication, and creativity. Students need to have the tools that allow for this learning environment whenever and wherever needed.

For those without this access, the school district must become the primary institution to bridge this gap between the haves and the have-nots. These environments require planned computer and peripheral replacement taking advantage of the increased speed and lower price of newer technology tools and the opportunities provided by the Internet and the tools provided by the district.

Where we are

All of our schools have better than a 2 to 1 student to computer ratio. We have strived to share these devices in a manner that allows access as needed in classrooms with emphasis on access in those classrooms that have a documented curricular need (such as middle school Social Studies and Language Arts).

We provide access to a variety of software tools, including but not limited to Microsoft Office, Google Apps for Education, and assistive software such as Read OutLoud™ and CoWriter™

Where we are going

We expect the rapid changes in computing devices and software to be the norm. Our annual review and 1 year spending decisions will allow us to continue to be flexible enough in our technology plan to take advantage of advances in technology. The chosen technology tools, both hardware and software, will not emphasize particular devices or applications, but instead are chosen based on the educational need of the targeted user and technology available at the time.

Data from the student technology survey (March 2013) reports that 85% of our students have easy or somewhat easy access to a computer at home and 98.5% of our students have internet. This high access at home fueled a decision not to pursue a 1:1 computer initiative that would send home a device to homes that already provided computer access for our students.

While we are fortunate to have such rich technology resources at home, we will continue to strive for 100% access outside school through programs that provide low cost devices for student that need them and safe learning spaces for our students to use technology outside the school day.

Savings in equipment cost and support from not supplying take-home devices allows us to hold the line of equipment expenditure while providing high quality access in the classroom.

This plan will increase access to technology enhanced learning environments by providing class sets (1:1 access) of devices for all secondary Language Arts, Social Studies and Science classrooms while continuing a 2:1 student to computer ratio in all other secondary and all elementary classrooms.

Elementary Devices:
- All K-3 classroom have 6 devices
- 2:1 Student ratio of devices for all other classes

Secondary devices:
- Class sets of devices in all Language Arts, Social Studies and Science classes
- 2:1 Student ratio of devices for all other classes
- Devices provided for all students with difficult access at home or no device at home through refurbishing of end-of-life district laptops.

	2015-16	**2016-17**	**2017-18**	**2018-19**	
K-3 classroom device refresh 100 sections x 6 x $500	$67,500	$67,500	$67,500	$67,500	$270,000
Elementary device refresh (2:1 ratio) = 3000 students/2 x $500	$187,500	$187,500	$187,500	$187,500	$750,000
Language Arts, Social Studies, Science devices 90 sections x 32/set x $500	$360,000	$360,000	$360,000	$360,000	$1,440,000
Other secondary refresh (2:1 ratio) (80 sections/2) x 32/set x $500	$160,000	$160,000	$160,000	$160,000	$640,000
Refurbish devices for 15% population	$5,000	$5,000	$5,000	$5,000	$20,000

Tools for Special Populations:
Special populations include Special Education, English Language Learners and the Highly Capable. The district will continue consultation with outside specialists regarding updated tools/ strategies, professional development and technology to support student learning and the new Common Core online student assessment accommodations. This strategy provides a resource library of technology tools to meet special population student needs. Tools added over time provide time for staff to learn to effectively implement new tools and allows for change as technology advances.

	2015-16	2016-17	2017-18	2018-19	
Tools that support special populations	$20,000	$20,000	$20,000	$20,000	$80,000
Student access in SpEd classrooms- refresh according to life cycle		$50,000		$50,000	$100,000
1:1 in Language Arts (8 sections x 20 devices/section)	$40,000	$40,000			$80,000
Student Accommodation Tools	$25,000	$25,000	$25,000	$25,000	$100,000

Software:
Maintain existing licensing agreements with Microsoft.
Continue use of Google Apps for Education.

	2015-16	2016-17	2017-18	2018-19	
Microsoft school agreement • Server software • Operating System • Office	$60,000	$60,000	$60,000	$60,000	$240,000
GoTahoma: Google Apps for Education	N/C	N/C	N/C	N/C	N/C
Annual subscriptions Elementary reading Keyboarding Various as needed	$25,000	$25,000	$25,000	$25,000	$100,000

Library/Media Centers: Computers for all libraries.

	2015-16	2016-17	2017-18	2018-19	
Computer refresh: Provide access for book checkout and student usage 50 devices x $800		$40,000			$40,000
Library management software annual fees: • Follett software • ESD hosting	$11,300	$11,300	$11,300	$11,300	$45,200
Tools for electronic book signout (eBooks)	$5,000	$5,000	$5,000	$5,000	$20,000
Information resources online subscriptions	$5,000	$5,000	$5,000	$5,000	$20,000

Learning Commons Staff-THS:
Student workspace with adult supervision. Wireless access and devices available.
Open 16 hours/week

Staffing cost	2015-16	2016-17	2017-18	2018-19	
	$10,000	$10,000	$10,000	$10,000	$40,000

Battery Replacement: as needed. Estimated to increase as devices age

	2015-16	2016-17	2017-18	2018-19	
Student devices	$1,000	$1,000	$5,000	$5,000	$12,000

Learning Management System

	2015-16	2016-17	2017-18	2018-19	
Learning Management System	$5,000	$5,000	$5,000	$5,000	$20,000

Learning Environment- Student Tools and Access Totals

	2015-16	2016-17	2017-18	2018-19	
	$997,300	$1,087,300	$961,300	$1,011,300	$4,057,200

Infrastructure

Vision

Establish and maintain a network infrastructure that is secure, reliable, scalable and responsive while providing the necessary capacity and flexibility for students and staff to access the information and tools necessary to meet learning and job goals.

Where we are

Since 2006, technology operations has progressed from an infrastructure that supported one or two computers per classroom and one computer lab per school to now supporting over 6,000 computers including more than 5000 wireless laptops and other devices. This infrastructure provides:

- Fast and reliable access to services such as file storage, email and high-speed internet access.
- Content filtering, virus protection and other security measures to help ensure the system's security.
- A wireless access point in all classrooms and other strategic areas to ensure a responsive and reliable experience.
- Server virtualization to consolidate hardware and provide dynamic failover in case of hardware failure.
- A high-speed fiber connection to each School as well as multiple connections to the internet to provide redundancy.
- Network access for BYOD (Bring Your Own Device).
- A VoIP (Voice over IP/internet) phone system that saves the district approximately $50,000 / yr. in phone system maintenance and connection costs.

Where we are going

Technology operations recognizes that technology tools, both hardware and software, will continue to rapidly change and are dependent on robust access to district services, the Internet and cloud based services. To this end, we will continue to develop and maintain an infrastructure that supports the various devices that best serve learning and job goals while providing a reliable, flexible and seamless experience for students and staff.

Servers, Storage and Network Hardware

Through annual review, servers, storage and network hardware are refreshed and additional capacity added as needed. Off site (out of district) backup will be implemented in 2016 to ensure the ability for complete system restoration in the event of a major disaster (fire, earthquake, volcanic eruption).

	2015-16	2016-17	2017-18	2018-19	
SAN (Storage Area Network) refresh	$125,000				$125,000
Additional backup storage			$25,000		$25,000
Offsite backup solution		$50,000			$50,000
Virtual server hardware refresh	$60,000				$60,000
SQL hardware refresh		$20,000			$20,000
Firewall / Load Balancer refresh		$60,000			$60,000
District Area Network Switches			$50,000		$50,000
Additional hardware	$15,000	$15,000	$15,000	$15,000	$60,000

Miscellaneous costs

	2015-16	2016-17	2017-18	2018-19	
Technology Systems Engineer workstations		$15,000			$15,000
Bandwidth fees for Internet access	$20,000	$20,000	$30,000	$30,000	$100,000
Mobile Device Management Software (tablets & cell phones)	$10,000	$10,000	$15,000	$15,000	$50,000
Consultant fees as needed for projects	$25,000	$25,000	$25,000	$25,000	$100,000
Technology Operations training	$10,000	$10,000	$10,000	$10,000	$40,000

Personnel Salaries & Costs

	2015-16	2016-17	2017-18	2018-19	
Technology Operations salaries and benefits	$340,600	$340,600	$340,600	$340,600	$1,362,400
Summer staffing – imaging and deployment	$15,000	$15,000	$15,000	$15,000	$60,000

Infrastructure Totals

	2015-16	2016-17	2017-18	2018-19	
	$620,600	$580,600	$520,600	$445,600	$2,167,400

Bond Issuance

	2015-16	2016-17	2017-18	2018-19	
Bond Issuance	$110,000				$110,000

Contingency Fund

	2015-16	2016-17	2017-18	2018-19	
Contingency Fund	$80,000	$180,000	$220,000	$220,000	$700,000

Tech Plan Totals

	2015-16	2016-17	2017-18	2018-19	
	$2,635,610	$2,899,410	$2,698,760	$2,557,260	**$10,791,040**

Glossary of Terms

ActivBoard

Activboard is a brand of interactive whiteboard manufactured by Promethean, Inc*. An interactive whiteboard is a large, wall mounted interactive display that connects to a computer. A projector projects the computer's desktop onto the board's surface where users control the computer using a pen. The board is typically mounted to a wall or floor stand.** The Tahoma School District has provides and supports Activboards in all secondary math classrooms (including Special Education math classrooms). In several school, PTA funds have been used to purchase Activboards though a Promethean, Inc. PTA discount program.
***http://www.prometheanworld.com/us/english/education/home/**
****http://en.wikipedia.org/wiki/Interactive_whiteboard**

Blended Learning

Blended learning is a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path or pace.* The students generally do not meet every school day and may stay in touch with the instructor and each other through social media, email or a Learning Management System.

*For more information: Blended Learning
*http://en.wikipedia.org/wiki/Blended_learning

Classroom 10

Classroom 10 describes the curriculum and instruction model for the Tahoma School District. Foundational to this **http://www.k12.wa.us/CoreStandards/**curriculum and instruction model is a belief that the core content in each discipline provides a vehicle to teach to our District Outcomes, thinking skills and habits of mind.

For more information: Classroom 10
http://www.tahomasd.us/pages/Tahoma_School_District_409/Departments/Teaching_Learning/Classroom_10

Common Core State Standards

A real-world approach to learning and teaching that require a practical, real-life application of knowledge to prepare students for success in college, work and life. These K-12 learning standards go deeper into key concepts in math and English language arts.

For more information: Common Core
http://www.k12.wa.us/CoreStandards/

Core Curriculum
The Core Curriculum is the set of common curriculum required of all students and considered the necessary general education for students. In general, reading, writing , mathematics and social studies comprise the core curriculum.

Differentiation
Differentiation is the practice of providing different students with different avenues (often in the same classroom) to acquiring content by developing teaching materials and assessment measures so that all students within a classroom can learn effectively, regardless of differences in ability.

For more information: Differentiated Instruction
http://en.wikipedia.org/wiki/Differentiated_instruction

Flipped Classroom
The flipped classroom is a form of blended learning in which students learn new content online by watching video lectures, usually at home, and what used to be homework (assigned problems) is now done in class with teacher offering more personalized guidance and interaction with students, instead of lecturing. *

For more information: Flip teaching
*http://en.wikipedia.org/wiki/Flip_teaching

Google Apps for Education/ GoTahoma
Google apps supervised and administered by the Tahoma school district domain. GoTahoma is used by teachers and staff to provide opportunities for collaboration, communication, and creativity. Google docs, Presentation, Spreadsheets, Forms, email and Sites are example of the tools that are used wit in the GoTahoma domain.

For more information:Google Apps for Education
http://www.google.com/enterprise/apps/education/products.html

Interactive Projectors
An interactive projector connects to a computer and projects the computer's desktop onto the board's surface where users control the computer using a pen.

Learning Management System (LMS)
A Learning Management System is a software application for the administration, documentation, tracking, reporting and delivery of e-learning education courses or training programs.* Access is through a web portal. An LMS can be used for courses taken completely online, blended classes or to enhance a standard class.

For more information:Learning Management System
http://en.wikipedia.org/wiki/Learning_management_system

Mobile Device Management/MDM
Software that allows technology operations to provision, monitor, secure and troubleshoot mobile devices such as tablets and cell phone.

Outcomes and Indicators
The 6 Outcome and Indicators are the cornerstone of our vision to support student learning and provide the tools and experiences every student needs to create an individual, viable and valued path to lifelong personal success.

- Self-Directed Learner
- Collaborative Worker
- Effective Communicator
- Quality Producer
- Complex Thinker

For more information: [Outcomes and Indicators](http://www.tahomasd.us/files/_jdEfB_/c46f0955fa6008643745a49013852ec4/Outcomes_and_Indicators.pdf)
http://www.tahomasd.us/files/_jdEfB_/c46f0955fa6008643745a49013852ec4/Outcomes_and_Indicators.pdf

Social Media
Social media refers to interaction among people in which they create, share, and/or exchange information and ideas in virtual communities and networks. These interactions occur online using tools such as Facebook, Pinterest, Twitter, LinkedIn, Instagram and Google+. When social media is used for educational purposes, educators will use systems that are age appropriate and which may be restricted to school-controlled applications.

For more information: [Social Media](http://en.wikipedia.org/wiki/Social_media)
*http://en.wikipedia.org/wiki/Social_media

10Tech Teacher Leader (TTTL)
Classroom 10 Technology Teacher leaders (10Tech Teacher Leader) are classroom teachers who work with the Instructional technology Coaches to help teachers in implementing best technology practices and technology use in the classroom.

Cost Summary					
Professional Development	**2015-16**	**2016-17**	**2017-18**	**2018-19**	
Tech Summit	15,600	15,600	15,600	15,600	62,400
Tech Summit release	2,560	2,560	2,560	2,560	10,240
Elem TTTLs	18,200	18,200	18,200	18,200	72,800
Training/Collaborative time	21,000	21,000	21,000	21,000	84,000
Secondary TTTL	9,600	9,600	9,600	9,600	38,400
Release time	40,000	40,000	40,000	40,000	160,000
Per diem	9,000	9,000	9,000	9,000	36,000
Flexible learning PD	10,000	10,000	10,000	10,000	40,000
Summer Conference	9,000	9,000	9,000	9,000	36,000
Conferences	13,000	18,000	13,000	18,000	62,000
Video Library	8,000	8,000	8,000	8,000	32,000
Coordinator/Coach Salaries	275,000	283,500	292,000	301,000	1,151,500
Subtotal Professional Development	**430,960**	**444,460**	**447,960**	**461,960**	**1,785,340**
Information & Evaluation	**2015-16**	**2016-17**	**2017-18**	**2018-19**	
School Data Solutions-Homeroom	25,000	25,000	25,000	25,000	100,000
Data Base management	52,000	53,000	54,000	55,000	214,000
Student Assessment-Classroom	25,000	25,000	25,000	25,000	100,000
Skyward management	20,000	20,000	21,000	22,000	83,000
Data collections	5,000	5,000	5,000	5,000	20,000
Program Evaluations	15,000	15,000	15,000	15,000	60,000
SharePoint Expansion	10,000		10,000		20,000
TSD website	4,000	4,000	4,000	4,000	16,000
Subtotal Information & Evaluation	**156,000**	**147,000**	**159,000**	**151,000**	**613,000**
Learning Environment Student Tools	**2015-16**	**2016-17**	**2017-18**	**2018-19**	
K-3 classroom devices	67,500	67,500	67,500	67,500	270,000
Elementary devices	187,500	187,500	187,500	187,500	750,000
Secondary LA, SS and Science class devices	360,000	360,000	360,000	360,000	1,440,000
Secondary devices- Other classes	160,000	160,000	160,000	160,000	640,000
Refurbish for 15%	5,000	5,000	5,000	5,000	20,000
Special Populations Support	20,000	20,000	20,000	20,000	80,000
Special Populations classroom access		50,000		50,000	100,000
Special Populations LA 1:1 (8 classes)	40,000	40,000			80,000
Student accommodation	25,000	25,000	25,000	25,000	100,000

	2015-16	2016-17	2017-18	2018-19	
tools					
Microsoft School Agreement	60,000	60,000	60,000	60,000	240,000
Annual Software	25,000	25,000	25,000	25,000	100,000
Discovery Education Video	10,000	10,000	10,000	10,000	40,000
Library computers		40,000			40,000
Library software	11,300	11,300	11,300	11,300	45,200
eBook sign out	5,000	5,000	5,000	5,000	20,000
Information Resources- Online subscriptions	5,000	5,000	5,000	5,000	20,000
Learning Commons- THS after school	10,000	10,000	10,000	10,000	40,000
Battery replacement	1,000	1,000	5,000	5,000	12,000
Learning Management System	5,000	5,000	5,000	5,000	20,000
Subtotal Student Tools	**997,300**	**1,087,300**	**961,300**	**1,011,300**	**4,057,200**
Learning Environment- Staff and Building Tools	**2015-16**	**2016-17**	**2017-18**	**2018-19**	
Certificated laptops- other 130			45,500	45,500	91,000
Device in every class-350 classrooms			122,500	122,500	245,000
Classroom staff laptops		122,500	122,500		245,000
Elementary projectors	50,000	50,000			100,000
Secondary Projectors	70,000	70,000			140,000
Secondary math refresh		76,800	38,400	38,400	153,600
Document cameras	43,750	43,750			87,500
Network printers	15,000	15,000	15,000	15,000	60,000
Peripherals	10,000	10,000	10,000	10,000	40,000
Classified desktops		40,000			40,000
Admin iPad refresh	20,000				20,000
Bulbs and batteries	1,000	1,000	5,000	5,000	12,000
Stop/Loss	16,000	16,000	16,000	16,000	64,000
Garage	15,000	15,000	15,000	15,000	60,000
Subtotal Staff & Building Tools	**240,750**	**460,050**	**389,900**	**267,400**	**1,358,100**
Infrastructure	**2015-16**	**2016-17**	**2017-18**	**2018-19**	
SAN refresh	125,000				125,000
Additional backup storage			25,000		25,000
Offsite backup solution		50,000			50,000
Virtual server hardware refresh	60,000				60,000
SQL hardware refresh		20,000			20,000
Firewall/ Load Balancer refresh		60,000			60,000
District Area Network Switches			50,000		50,000

Additional Hardware	15,000	15,000	15,000	15,000	60,000
TSE workstation		15,000			15,000
Bandwidth fees	20,000	20,000	30,000	30,000	100,000
Mobile Device Management	10,000	10,000	10,000	10,000	40,000
Consultant fees	25,000	25,000	25,000	25,000	100,000
Training	10,000	10,000	10,000	10,000	40,000
Salaries	340,600	340,600	340,600	340,600	1,362,400
Summer Staffing	15,000	15,000	15,000	15,000	60,000
	620,600	580,600	520,600	445,600	2,167,400
Bond Issuance	**110,000**				
Contingency	**80,000**	**180,000**	**220,000**	**220,000**	**700,000**
Subtotals by Year	**2,635,610**	**2,899,410**	**2,698,760**	**2,557,260**	**10,791,040**