Pacific Grove Unified School District

Educational Technology Plan

Plan Duration: 2022-2025
Committee Review Session Date(s): *Jan, Feb, 2022*
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Executive Summary

Technology is a critical tool for preparing students to succeed and thrive in the modern world. This 3-year strategic Ed Tech plan represents a shared and balanced vision for the integration of technology in the Pacific Grove Unified School District (PGUSD). The plan is comprised of three focus areas of implementation. Each focus area consists of an overarching goal directly linked to a set of objectives which are met through a series of specific action steps and services:

1. **Digital Learning and Literacy**
    - Create new "Flexible Learning Labs" to support project-based learning
    - Increase access to current and emerging digital tools
    - Expand digital citizenship and online safety programming for students and parents
2. **Technology Management**
    - Improve hardware inventory controls, asset management, and cybersecurity protocols
    - Upgrade the district's security camera system
    - Update and align classroom technology installations at each grade level
3. **Services and Support:**
    - Refine Tech Helpdesk and IT Ticketing system
    - Expand classroom technology training and support for end-users
    - Streamline web content and digital communication methods

In 2014, the voters of Pacific Grove approved Measure A - the Educational Technology Bond for PGUSD. To date, Measure A funds have been used to significantly improve the district's technology infrastructure and expand access to digital tools to support teaching and learning across the district. This revised 3-year strategic Ed Tech plan (2022-25) continues much of the work completed under the previous version of the tech plan (2016-19) while focusing more closely on the current technology integration, management, and training needs of the district.

Purpose of This Plan

Over the next three years, the goals, outcomes and action steps outlined in this plan will serve to guide the procurement and management of the district's Ed-Tech Bond/Measure A purchased technology. This plan provides a balanced approach to the deployment, implementation, management, and support of the use of technology in PGUSD. Additionally, this plan aligns with the district's Local Control and Accountability Plan (LCAP) and further defines the role of technology in advancing the district's strategic goals and broader mission.

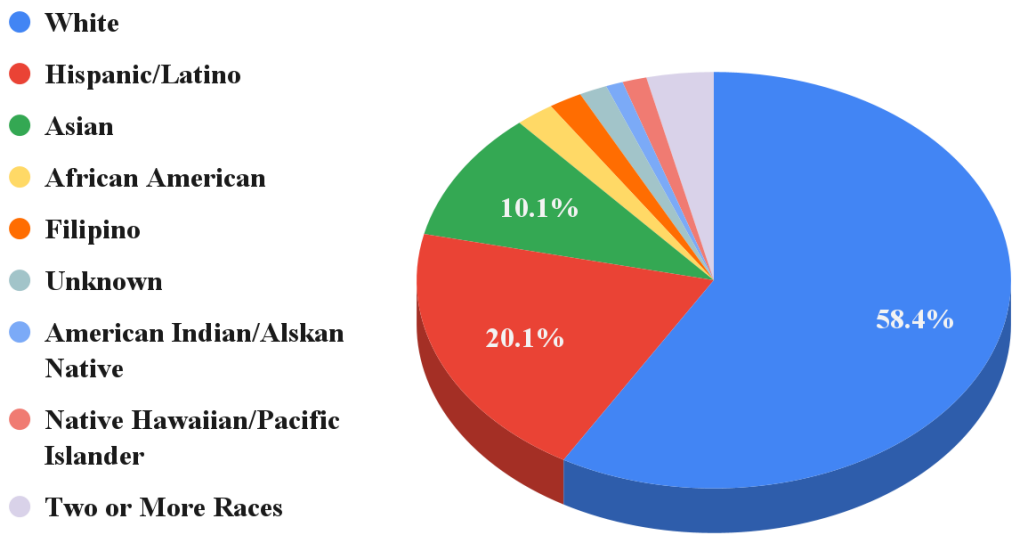
Areas of implementation:

1. **Digital Learning and Literacy:** Facilitate effective educational technology integrations to promote advances in both teaching and learning.
2. **Technology Management:** Standardize, align, and optimize procurement, inventory, security, and lifecycle management of hardware and software.
3. **Services and Support:** Ensure equitable access, training, and responsive tech support to end users throughout PGUSD.

Student Demographics (2021-22)

Total Enrollment: 1,841 (as of 2/28/22)

White	58.43%
Hispanic/Latino	20.13%
Asian	10.08%
African American	2.11%
Filipino	1.82%
Unknown	1.52%
American Indian/Alaskan Native	0.94%
Native Hawaiian/Pacific Islander	1.32%
Two or More Races	3.65%
Total	100%



District Technology Planning Structure

PGUSD Tech Committee

The district's technology committee convenes on a monthly basis during the school year. The committee's core functions are to guide and oversee technology procurement as well as identify and implement procedures and protocols for better integrating and managing the use of technology in PGUSD. More specifically, the technology committee serves to:

1. Provide input, guidance, and recommendations on technology projects and initiatives outlined in the district's Ed-Tech Plan.
2. Evaluate and prioritize Measure-A technology purchase proposals and ensure that purchases are aligned with provisions contained in the district's Ed-Tech Bond/Measure-A.
3. Distribute communications and updates to the broader school community on current technology projects, initiatives, identified challenges, and solutions.

The committee is composed of school site and district level personnel including teachers, classified staff, administrators, and parents. Committee meetings are open to the school community as a whole.

2021-22 PGUSD Technology Committee

• Raymond DeVost, Interim Technology Systems Director/IT Tech (PGHS) • Louis Algaze, Director of Technology Systems • Jessica Grogan, English Teach/Tech Ninja (PGHS) • Sean Keller, Principal (Robert Down) • Steve Ibrahim, 3rd Grade Teacher/Tech Ninja (Robert Down) • Sean Roach, Principal (PGMS) • Buck Roggeman, Principal (Forest Grove) • Matthew Binder, Director of Educational Technology • Brice Gamble, History Teacher/Tech Ninja (PGMS) • Christopher McNary (Non-PGUSD Employee Parent) • Leslie Ternullo, Administrative Specialist, Curriculum & Instruction	• Andrew Bradley, Digital Learning Teacher • Ivy Kong, Math Teacher (PGMS) • Jason Tovani, Assistant Principal (PGMS) • Maryn Sanchez, 5th Grade Teacher/Tech Ninja (Forest Grove) • Manuel Villagomez, IT Tech (Robert Down) • Carey Parker, IT Tech (Forest Grove) • Grayson Fong, IT Tech (PGMS) • Ani Silva, Director of Curriculum, Special Projects • Christine Sosa Loomis (Non-PGUSD Employee Parent) • Richard Smith (Non-PGUSD Employee Parent) • Sara Bikett, Administrative Specialist for Student Services

PGTech

The district's core tech team - **PGTech** - is comprised of district and site technology staff: technology directors, site IT techs, and the digital teacher. The team meets on a bi-monthly basis to identify and address current challenges, share best practices, and collaborate on improving tech management processes and workflows. Each member of PGTech serves on the district's technology committee and provides critical perspective and site level leadership in all aspects of technology integration.

Current Technology Challenges

In Fall 2021, PGTech conducted a site-by-site technology needs assessment. The following areas were identified as the top 4 priorities:

1. **Inventory/hardware lifecycle management**
2. **Classroom technology hardware updating, standardization, and alignment**
3. **Cybersecurity/threat detection and prevention**
4. **Professional Development (PD), Communication, Training, and tech support**

The overarching goals, outcomes, supporting actions, and signature projects outlined in this plan directly address these four challenges.

1: Digital Learning and Literacy

Rationale

Learning in the modern age, in either the face-to-face/classroom setting or in a remote/virtual format, is highly dependent on technology. Students at each grade level are expected to use technology frequently to create original work, communicate and collaborate with peers, solve complex problems, and demonstrate their academic knowledge, skills, and abilities. Deeper learning is

achieved when instruction is intentionally designed around clear learning targets, employs sound teaching strategies and pedagogy, and integrates effective technology tools in an intentional and targeted manner. Assessment results, analytics, and other measures provide educators with timely evidence of student progress and are frequently used to inform instructional and programmatic decisions at the classroom, site, and district levels.

The International Society for Technology In Education (ISTE) Standards serve to better guide educators towards balanced and effective integration of technology. These standards provide the basis for differentiating instruction in order to create personalized, highly engaging learning experiences for all students. The ISTE Standards also provide meaningful direction to educators in their planning and intentional use of technology for the purposes of increasing student engagement and creating impactful learning opportunities for students in today's classrooms.

The Seven Domains of the ISTE Standards for Student Use of Technology

1. **Empowered Learners:** Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences.
2. **Digital Citizen:** Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.
3. **Knowledge Constructor:** Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.
4. **Innovative Designers:** Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
5. **Computational Thinker:** Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.
6. **Creative Communicator:** Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.
7. **Global Collaborator:** Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

1: Goal

Students use a variety of digital tools to communicate, collaborate, solve complex problems, create original works, and achieve project outcomes as evidence of their learning.

1: Implementation

Outcome	Starting Year	Actions/Services	Person(s) Responsible	Anticipated Cost and Funding Source	Evaluation /Metrics
1a. Flex Learning Labs replace existing computer labs at Forest Grove, Robert Down, and PGMS. Each flex lab is outfitted with the following design attributes and technology installations: ● Flexible/mobile/lightweight student furniture (desks, chairs) ● Wall or mobile stand-mounted HD flat panel displays ● 86" interactive touch display panel (main presentation surface) ● Hi-definition auto-tracking/PTZ (pan-tilt-zoom) web camera and wireless microphones ● Integrated omni directional classroom audio system ● Wireless presentation/screencasting/ mirroring hardware ● 1:1 Chromebooks (for grades 2-5) and 1:1 Chrome tablets (for grades K-1) ● Device Charging Cabinet/Station ● Headphones, mice, and other required peripherals	2023	1. Initiate committee level planning to formulate the design specifications and draft budget for each designated Flex Learning Lab. 2. Present plans to school staff at a regularly scheduled staff meeting. 3. Provide progress reports to the school community at regularly scheduled public meetings. 4. Reserve Measure A (Ed-Tech Bond) and Measure D (Facilities Bond) funds needed to reach stated outcome (1a).	Ed Tech Director Tech Systems Director Digital Teacher IT Techs	*Forest Grove Flex Lab Conversion:* $55,000 Total ○ $25,000 (Measure A), ○ $10,000 (Measure D) ○ $20,000 (General) *Robert Down Flex Lab Conversion:* $45,000 Total ○ $20,000 (Measure A), ○ $10,000 (Measure D) ○ $15,000 (General) *PGMS Conversion:* $45,000 Total ○ $25,000 (Measure A), ○ $10,000 (Measure D) ○ $20,000 (General)	Work order completion records, project status reports and other communications to the school community

1b. 1:1 Google Chrome Tablets are deployed in Grades K-1, replacing iPads as the standard 1:1 student device at the primary grade level. Students with special needs are supported with the appropriate device(s) and apps as indicated in the individual education plan (IEP).	2024	1. Engage K-1 teachers in discussions around the use of Chrome Tablets as a replacement of the iPad as the standard issued student device. 2. Research and evaluate various models of available Chrome tablets to determine the most appropriate option. Share findings and collect feedback from K-1 teachers. *Chrome tablets must offer teachers and students like-for-like functionality and educational value as existing iPads in order to move forward with this implementation.* 3. Procure necessary hardware and accessories: Chrome tablets, charging/storage cabinets, carts, covers/cases, product warranties, power supplies, and other required equipment as needed to complete the implementation. 4. Receive, inventory, and install tablets to classrooms. 5. Provide ongoing training/PD to K-1 teachers on the use of Chrome OS, Apps, and classroom level device management.	Tech Directors IT Techs K-1 Teachers Digital Teacher	$110,000 (Measure A)	Purchase and inventory records, training logs, and analytics (Google Admin Console)

1c. Students in Grades K-1 use technology throughout the year to demonstrate their comprehension of subject matter - creating and sharing original works. Examples of tech-enhanced K-1 student learning outcomes/projects include: ● Create voice/audio narrated digital storybooks or autobiographies ● Design digital photo albums with simple captions ● Develop "ePal" storyboards in collaboration with their grade level peers. ● Contribute to a class blog.	2023	1. Equip classrooms with grade-level appropriate technology as needed - including student devices, and software applications (see Outcome 2d). 2. Create a schedule for using the Flexible Learning Lab as a space to facilitate student project-based learning. 3. Create rubrics and assessments to measure student learning.	Grade K-1 Teachers Elementary Principals Digital Teacher Elementary IT Techs	N/A	Lesson artifacts, student products, project and assessments scoring records
1d. Students in Grades 2-5 create collaborative web-based research projects that integrate digital content and interactive multimedia elements to demonstrate creativity and communicate depth of knowledge and comprehension of subject matter.	2022	1. Equip classrooms with grade-level appropriate technology as needed - including student devices, and software applications (see Outcome 2d). 2. Create and maintain a regular schedule for the Flexible Learning Lab as a space to facilitate student project-based learning. 3. Create rubrics and assessments to measure student learning.	Grade 2-5 Teachers Elementary Principals Digital Teacher Elementary IT Techs	N/A	Lesson artifacts, student products, project and assessments scoring records

1e. Students in Grades 3-12 build and manage digital portfolios using Google Suite - Apps/Drive and use other digital tools to produce an evidentiary digital record of learning in PGUSD.	2022	1. Provide training and follow-up support to teachers and other staff on the use of Google Apps, digital curriculum programs, Synergy TeacherVUE/SIS, and online assessment tools (e.g. Synergy Assessment, NWEA, etc.). 2. Equip classrooms with grade-level appropriate technology as needed - in addition to 1:1 student devices, and software applications. (see Outcome 2d).	Grade 3-12 Teachers Site Administrators Digital Teacher IT Techs Teacher Tech Leads	N/A	Lesson artifacts, student products, project and assessments scoring records
1f. Students in grades 3-12 use technology to research, collect and analyze data, create solutions to an identified problem, and communicate their knowledge and understanding of subject matter to an audience beyond the classroom.	2022	1. Design content area lessons, assessments, and evaluation tools/rubrics in alignment with the ISTE Standards. 2. Provide training/support to teachers on classroom technology, blended lesson design methods, ISTE standards alignment, and assessment strategies.	Grade 3-12 Teachers Site Administrators Digital Teacher Teacher Tech Leads	N/A	Lesson artifacts, student products, project scoring records, rubrics.
1g. Students in Grades 3-12 engage in digital/online learning communities (e.g. wikis, podcasts, blogs, discussion forums) to share their content knowledge and understanding of subject matter with their peers.	2022	1. Ensure classrooms are equipped with grade-level appropriate technology, student devices, and relevant software applications. (see Outcome 2d). 2. Provide training/support to teachers on classroom technology, blended lesson	Grades 3-12 Teachers Principals Digital Teacher Teacher Tech Leads	N/A	Lesson artifacts, student products, project scoring records, rubrics.

		design and assessment strategies.			
1h. Students in grades 4, 5, 7, and 9 participate in an integrated digital citizenship/tech safety program to improve awareness and to learn to better engage with online communities in a safe, positive, and responsible manner.	2023	1. Research, evaluate/pilot, and purchase a comprehensive digital safety/citizenship program for student use in target grade levels in PGUSD. 2. Schedule and deliver "mini monthly-PD" events for teachers/staff that focus on grade-level specific digital citizenship/safety topics. 3. Students sign a Digital Safety Agreement indicating their commitment to maintaining a respectful and safe online presence.	Ed Tech Director Site Administrators Digital Teacher	$4,000/year (Measure A)	Student survey data, feedback forms, incident reports, analytics
1i. Teachers frequently model responsible and ethical use of technology - providing opportunities for students to interact with their peers online in a safe and positive manner.	2022	1. Deliver digital safety themes, activities, resources, and updates to teachers and staff on a monthly basis during the school year. 2. Provide periodic updates to staff on relevant digital safety best practices and student data privacy protection laws and policies such as aspects of CIPA and COPPA	Ed Tech Director Teachers Site Administrators Digital Teacher	N/A	
1j. Two (2) Parent Ed Tech Nights are scheduled each year to provide practical strategies, information, and resources on technology tools and safety/digital citizenship topics.	2022	1. Procure and organize training materials, content, and resources used during Parent Tech Nights (literature/handouts, program modules, videos, etc.).	Ed Tech Director Digital Teacher	$4,000/year (Measure A)	Post event surveys, participation records, feedback forms.

		2. Collaborate with school administration on planning and scheduling events. 3. Distribute event promotional materials through newsletters, social media post, and other engagement avenues to promote Parent Tech Night events.			

2: Technology Management

Rationale

As the district's dependency on technology grows, so does the challenge of managing the entirety of the organization's technology infrastructure. This includes the increased number of connected devices and an expanding collection of online platforms, digital programs, and applications used by teachers, students, and staff. More accurate tracking and managing of connected devices and programs is crucial to supporting the day-to-day operations of the school district. In addition, as cybersecurity threats continue to rise, appropriate safeguards must be deployed to better manage and protect data and technology assets throughout the district.

2: Goal

Reform technology inventory, lifecycle, and cybersecurity protocols to increase access, improve cost savings and reduce vulnerabilities.

2: Implementation

Outcomes	Starting Year	Actions/Services	Person(s) Responsible	Anticipated Cost and Source	Evaluation /Metrics
2a. An updated hardware and device inventory management procedure/protocol is developed to include the use of an inventory management platform with common protocols to better track and manage district technology assets.	2023	1. Identify, compare, evaluate, and purchase dedicated technology asset management/inventory system. 2. Provide training for Site IT Techs on the use of inventory management system and workflow.	Director of Tech Systems IT Techs	$5,000/year (Measure A)	System documentation, usage reports, analytics
2b. Enhanced security layers and protocols are developed and implemented to improve integrity and security of district technology assets, elevate campus safety, optimize web filtering and threat detection, and ensure greater protection of data.	2022	1. Develop procedures for conducting regular network performance assessments and analytics to identify and resolve inconsistent network activity and wifi connectivity discrepancies. 2. Engage MCOE in identifying current vulnerabilities. 3. Evaluate, identify, and purchase an appropriate web security system. 4. Provide on-going updates and direction to the school personnel on current risks levels and threat mitigation strategies. 5. Revise/update password reset/refresh policy for all PGUSD staff requiring updating passwords	Director of Tech Systems IT Techs	$4,500/year (Measure A)	Network activity logs, analytics, and usage reports

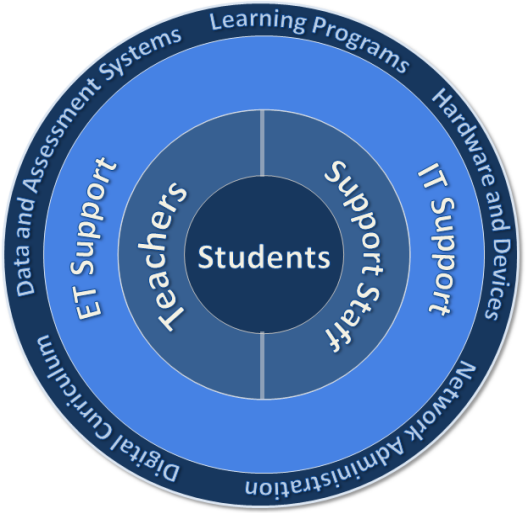
		every 6 months as required by state auditors.			
2c. Replace or upgrade security camera system with a cloud-based/managed solution to achieve increased coverage, improved resolution, reliability, and performance.	2023	1. Engage site administrators to determine critical needs, performance expectations, and desirable functionalities. 2. Evaluate project proposals relative to costs and timelines. 3. Develop and publish RFP as needed. 4. Revise Long Term Measure-A Budget Development projections to include security camera replacement project costs and payment schedule. 5. Establish project implementation timelines, procedures, and tasks. 6. Schedule training for all admin.	Tech Systems Director Site Admin Director of Facilities Assistant Superintendent	$150,000 (Measure A)	Planning documentation, Purchase records, training records.
2d. A standard classroom technology configuration is achieved for all K-12 core classrooms (See *Modern Classroom Technology Upgrades and Configurations* below).	2023	1. Examine and inventory existing core classroom technology at each site and establish an updated database of technology inventory. 2. Conduct needs analysis and identify shortages of classroom technology against the standard configuration model. 3. Collect input from grade level teams and tech lead teachers on project timelines, design considerations, and technology preferences.	Tech Directors Facilities Director Site IT Techs Site Admin	$7,000 per Classroom (Measure A)	Planning documentation, purchase, inventory, and installation records, updated inventory database

		4. Develop cost projections and long term budgets aligned with available Measure A/Ed-Tech Bond funds. 5. Procure hardware and engage Facilities/Transportation Dept. to coordinate phased installation timelines. 6. Provide appropriate training and ongoing support focused on best practices/strategies around the use of updated classroom technology for teachers, support staff.			
2e. Assistive/adaptive technologies are implemented where needed to improve instruction, access to content, and learning for students with disabilities.	2022	1. Conduct needs assessment for assistive and adaptive technology and identify appropriate solutions and implementation constraints.. 2. Engage vendors to evaluate and compare available assistive technologies, associated costs, and best practices for integration in classrooms where needed. 3. Evaluate and purchase appropriate assistive and adaptive technology. 4. Provide appropriate training and support focused on best practices of classroom assistive and adaptive technology integration and management.	Student Services Director Ed Tech Director	(N/A: Varies based on need)	Reports and product documentation, purchase records, teacher/student, parent feedback reports
2f. A "Device as a Service" (DaaS) model of technology acquisition and refresh/replacement cycle is		1. Engage various DaaS vendors (e.g. SHI, 2ndGear, ITPro, etc.) and compare available options and costs.	Tech Systems Director Site IT Techs	TBD (Measure A)	Planning documentation, pricing literature, assessment

adopted for improved cost savings and more efficient hardware management.	2024	2. Conduct a ROI (return on investment) analysis and budget projection assessment to identify advantages of DaaS compared to conventional technology purchasing model. 3. Present findings and Technology Committee's endorsement to the PGUSD Board to secure implementation approval.	Technology Committee Assistant Superintendent		reports, vendor quotes, inventory, and installation records

3: Services and Support

Rationale



As an essential tool to simplify, streamline, and improve job-performance outcomes, technology must remain accessible, functional, and reliable. When technology fails it needs to be repaired or replaced promptly. Without swift and responsive tech support, instruction and student learning can be negatively impacted. Staff must be supported with ongoing training/professional learning opportunities on current and emerging technologies that promote student success in the classroom and improve end user proficiency. The "wrap-around", responsive technology support system contained in this plan will ensure that users have the appropriate tools and training needed to be successful.

To this end, PGTech - the district's core tech team, consists of two complementary areas of specialization - *Educational Technology* (ET) and *Information Technology* (IT). Providing essential system administrative support, expertise, and training for school and district office staff as well as promoting best practices in the use of instructional technology at the school and classroom level, the "ET" side of the department also provides training and support to teachers on the use of classroom hardware, Google Apps, digital curriculum, and other online instructional platforms and tools with the aim of achieving higher success of student engagement and learning. "Teacher Tech Leads" - teachers who themselves have expertise in various educational technologies - serve

as ET leaders at their respective sites. The Director of Educational Technology, with assistance from the district's Digital Learning Teacher, oversees classroom technology integration, digital curriculum access, online assessment administration, and student data management for the district.

IT support is delivered primarily by the site IT Techs whose duties are determined in large part by the day-to-day needs at their individual sites. As an essential member of their school staff, the site IT Tech oversees all aspects of end user technology service and support on their campus. The longer range IT management and support priorities, which include infrastructure, hardware inventory/lifecycle management, network administration, and cybersecurity, are determined by the Director of Technology Systems. Both ET and IT personnel work in close collaboration to ensure that all end-user needs, within or outside of the classroom, are met in a timely and thorough manner. The table below indicates general specialized areas of support that each provides.

IT - Information Technology (Overseen by the Director of Technology Systems)	**ET - Educational Technology (Overseen by the Director of Educational Technology)**
Focus: Tech/IT systems administration, network infrastructure and monitoring, cybersecurity, hardware and software management	**Focus:** Instructional technology integration, blended learning, digital safety, classroom assessments, student data management

• **Hardware and Device Management**
  ○ Laptop and workstation setup and maintenance
  ○ Troubleshooting and Repair
  ○ Purchasing, inventory, life cycle management
• **Software Support**
  ○ Account initiation, login credentials management
  ○ Installations, updates/imports, and upgrades
  ○ Security Configurations
• **End-User Support, Training**
  ○ Basic training, refreshing
• **Network Engineering**
  ○ Performance monitoring, analytics
  ○ Cybersecurity (Firewall, Web filtering)
• **IT Project Management**
  ○ Budget development
  ○ Product evaluation
  ○ Vendor relations
	• **Teacher Professional Development**
	  ○ Devices: iPads, Chrome Tablets, Doc Cams, Interactive Panels, Chromebooks, display hardware
	  ○ Software: Google Apps for Education, Synergy Education/TeacherVUE, digital curriculum products
	• **Classroom Support**
	  ○ Integration of digital curriculum and assessment platforms
	  ○ Lesson design - 1:1/blended/digital learning strategies
	  ○ Digital citizenship - and school-to-home/parent communication and support
	  ○ Tech-mediated project-based learning
	• **Data and Assessment Management**
	  ○ State testing, online assessments administration, SIS Data Management, system administration, and state/CALPADS reporting.
	  ○ Student Achievement Dashboards and Analytics

3: Goal

Further develop and deploy a responsive, service-oriented, equitable system of tech support, procedures, and protocols to better meet the needs of all district technology users.

3: Implementation

Outcomes	Starting Year	Actions/Services	Person(s) Responsible	Anticipated Cost (Funding Source)	Evaluation /Metrics
3a. Site IT Techs are periodically deployed as a dedicated district level team to provide rapid and robust tech support for larger scale projects and services at sites across the district.	2022	1. Maintain bi-monthly PGTech/Tech Team meetings to promote cross-district collaboration to optimize tech support methods, procedures, and workflows. 2. Participate in ongoing professional development in areas related to software and hardware configuration, cybersecurity, and networking management (e.g. pursue Cisco Training and Certifications).	Tech Systems Director Site Administrators Site IT Techs	$4,000 (General Fund)	Meeting agendas and minutes, participation documentation, certifications
3b. Non-instructional work areas (e.g. office spaces, student service areas) are furnished with technology upgrades and relevant, job-embedded training and support is provided to staff as needed.	2022	1. Conduct a technology needs assessment of classified and support staff workspaces. 2. Submit requests for approval based on identified needs. 3. Procure and process purchase orders. 4. Receive, inventory, and install new technology in designated locations as needed.	Tech Systems Director Site IT Tech Director of Facilities	$25,000/year (Measure A)	Purchase, inventory and installation records, updated inventory database, training event/participation logs

3c. Refine and optimize the district's IT Helpdesk/Ticketing system to improve response and resolution time, monitoring, and reporting.	2022	1. Identify, compare, evaluate, and purchase a dedicated enterprise level IT Helpdesk/Ticketing management platform. 2. Provide training for IT Techs for managing the new system. 3. Provide communications and training to staff on the new IT Helpdesk system how to submit help tickets/request support. 4. Provide updates to the school community on the performance and trends of how the new system is functioning.	Tech Systems Director Site IT Tech	$4,000/year (Measure A)	Purchase, inventory and implementation records, communication and training participation records
3d. The district's Web Communications Coordinator position is revised to include additional IT support across the district, assisting the Director of Technology Systems with the completion of existing and future IT projects, hardware repair, management, and systems maintenance and administration..	2024	1. Consult HR department on details, requirements, implications of updating position description. 2. Create an updated job description that describes scope of responsibility, essential functions, relevant knowledge and abilities. 3. Present the updated position for action at a regular scheduled Board meeting.	Tech Directors HR Director	Stated salary of position (General Fund)	Revised job descriptions, board meeting minutes

3e. A Teacher Tech Lead serves at each school: A teacher who is the ed tech lead teacher at their site, guiding and supporting their colleagues in their use of existing and emerging ed tech tools.	2022	1. Collaborate with HR department to refine position description and scope of responsibility of the Teacher Tech Leads (previously Tech Ninjas). 2. Distribute announcement of position, review applicants, conduct interviews, and make selections as needed. 3. Conduct monthly meetings with *Teacher Tech Leads* to identify areas of focus, collect feedback, discuss challenges and create solutions, and plan future initiatives.	Ed Tech Director HR Director Assistant Superintendent Digital Teacher Site Admin	$4,000 annual stipend for teacher tech leads ($1000 per position - 4 total) (General Fund)	Updated job description, meeting and training event logs, surveys
3f. Create a student level tech team (e.g. “Junior Tech Ninjas” or “Tech Squad”) at FG, RD, PGMS, and PGHS to assist staff and peers with tech troubleshooting and support needs.	2024	1. Engage school admin and IT techs in designing student tech teams/squads, schedules, scope, models, and structures. 2.Identify and enlist qualified students annually to serve as members of their site’s student tech team.	Tech Directors Site IT Techs Site Administrators	$400/year misc. (Site Funds)	Students and staff feedback/survey results and reports
3g. Develop and implement a secure intranet within existing CMS accessible by district employees in order to streamline access to critical documents, improve district-wide communications, and expand access to essential job-embedded tools and training materials.	2023	1.Identify resources on the current site(s) specifically for district staff and replicate on an Intranet site 2. Ensure staff links are in place on all appropriate webpages.	Tech Directors Web Communications & IT Services Coordinator HR Director	Stated salary of position (General Fund)	Activity logs, analytics, and usage reports

Modern Classroom Technology Upgrades and Configurations

An updated, standardized, and aligned classroom technology configuration for each grade span is outlined below. Standardizing classroom technology will significantly improve device management and support. Furthermore, alignment of classroom hardware will significantly lower implementation costs and promote a more equitable system of technology access for teachers and students campus-wide.

K-1	2-5	6-8	9-12+
▪ Student Chrome Tablets w/protective cases (1:1) ▪ Charging cabinet ▪ Stereo headphones (1:1) ▪ Document camera ▪ Integrated screencasting/mirroring technology ▪ 86” LED Flat Panel Interactive Display ▪ Mounted Auto-Tracking (PTZ) HD Webcam ▪ Mounted omni-directional stereo speakers//soundbar ▪ A/V auxiliary hub ▪ Wireless mic (IR) ▪ Laptop (teacher)	▪ Student Chromebooks (1:1) ▪ Charging cabinet ▪ 15+ USB or wireless mice ▪ Stereo headphones (1:1) ▪ Document Camera ▪ Integrated screencasting/mirroring technology ▪ 86” LED Flat Panel Interactive Display ▪ Mounted Auto-Tracking (PTZ) HD Webcam ▪ Mounted omni-directional stereo speakers//soundbar ▪ A/V auxiliary hub ▪ Wireless mic (IR) ▪ Laptop (teacher)	▪ Student Chromebooks (1:1) ▪ Charging cabinet ▪ 15+ USB or wireless mice ▪ Stereo headphones (1:1) ▪ Document camera ▪ Integrated screencasting/mirroring technology ▪ 86” LED Flat Interactive Panel Display ▪ Mounted Auto-Tracking (PTZ) HD Webcam ▪ Mounted omni-directional stereo speakers/soundbar ▪ A/V auxiliary hub ▪ Wireless mic (IR) ▪ Laptop (teacher)	▪ Student Chromebooks (1:1) ▪ Charging cabinet ▪ 15+ USB or wireless mice ▪ Stereo headphones (1:1) ▪ Document Camera ▪ Integrated screencasting/mirroring technology ▪ 86” LED Flat Panel Display ▪ Mounted Auto-Tracking (PTZ) HD Webcam ▪ Mounted omni-directional stereo speakers//soundbar ▪ A/V auxiliary hub ▪ Wireless mic (IR) ▪ Laptop (teacher)

Conclusion

Technology is vital to the operation of any school district. It is an essential tool for achieving teaching and learning success in the modern classroom. Further alignment, standardization, optimization, and streamlining of technology management practices across PGUSD will improve collaboration, produce more favorable training outcomes, and facilitate equitable access to essential tools, technology services, and support. Any new technology implementations must provide a single point of access, cross platform interoperability, and deliver improved user interface design and functionality. Technology proposals must be thoroughly evaluated by the district technology staff - PGTech - prior to purchase and must integrate with existing systems and workflows. *See appendix for the* **PGTech - Technology Purchasing and Support Protocol.** Ultimately, the intent of this revised technology plan is to provide an intelligent path forward in the procurement, implementation, and management of technology for the purpose of supporting student and educator success in PGUSD over the next three years.

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Appendix

Current District-Furnished Technology:

- Synergy SIS - Student Information System and Assessment
- Google Suite for Education
- GoGuardian Chromebook Management and Web Monitoring System
- LCD projectors
- iPads (On-campus 1:1, grades K-1)
- Apple TV's, Chromecasts
- Staff Laptops/Desktops/Workstations - Dell Computers
- Chromebooks (On-campus 1:1, grades 2-12)
- Robotics/Coding Kits (CS/STEM programs)
- 3D Printers (middle school, high school)
- Document Cameras
- Printers, scanners
- A/V components and other peripherals (mice, webcams, speakers, etc.)
- Interactive whiteboards (SmartBoards) and Newline Interactive Flat Panel Displays
- Online curriculum and learning programs (core, intervention, supplemental)
- Targeted Intervention and supplemental digital programs (Scholastic, eSpark)
- Teaching/Learning Management Tools (Seesaw, Pear Deck, Ed Puzzle, Screencastify, etc.)
- Business Management Tools (InformK12, Follett Destiny, Harris Solutions-eSchool, Frontline, etc.)

Acronyms Used

- **IT:** Information Technology
- **ET:** Educational Technology
- **CMS:** Content Management System
- **PD:** Professional Development
- **PGUSD:** Pacific Grove Unified School District
- **HR:** Human Resources
- **ISTE:** International Society for Technology in Education
- **NWEA:** Northwest Evaluation Association
- **SIS:** Student Information System
- **MCOE:** Monterey County Office of Education
- **A/V:** Audio/Video
- **STEM:** Science, Technology, Engineering, Math
- **CALPADS:** California Longitudinal Pupil Achievement Data System
- **LCD:** Liquid Crystal Display
- **LED:** Light-Emitting Diode
- **IR:** Infrared
- **PTZ:** Pan, Tilt, Zoom
- **HD**: High Definition
- **CS:** Computer Science
- **N/A:** Not Available/Applicable
- **TBD:** To Be Determined
- **DaaS:** Device as a Service
- **ROI:** Return on Investment

Technology Implications of Distance Learning/Remote Instruction Due to the COVID-19 Pandemic

- Increased/ongoing training/PD in the use of essential distance learning tools: Screencastify, Google Apps, Seesaw, Pear Deck, Flip Grid, etc.
- Virtual Lesson Design Methods: Flipped classroom, asynchronous vs synchronous instruction, breakout-room small group instruction management
- Classroom Hardware/Device Use: Document cameras, interactive display panels, PTZ web cameras, A/V peripherals
- Infrastructure: Network capacity and management for live video streaming in support of hybrid learning
- Student Device Access: 1:1 take-home (vs. on-campus)
- Inventory Controls: Student device check-out/check-in
- Security: Firewall management, cybersecurity defense
- Home Internet Connectivity: Availability of take-home hotspots and data plans

PGTech - Technology Procurement and Support Guidelines and Protocol

(Endorsed by the PGUSD Tech Committee - November 23, 2021)

PGTech IT Services and Support

PGTech shall be consulted on all site and/or district-level technology purchasing plans and decision-making. PGTech cannot provide tech support/troubleshooting services and/or management assistance for any technology purchased without adequate consultation prior to purchase.

PGUSD is a **Google for Education**, Google Chrome and Microsoft Windows/Office school district. With the exception of Apple devices used in certain instructional programs (e.g. Digital Photography at PGHS) and iPads where the Individual Education Plan (IEP) special iPad-specific apps, Chrome and Windows OS devices are designated as the standard computing devices for PGUSD.

- ***Hardware:*** All Hardware purchases shall be aligned/compatible with the district's hardware configuration model. PGUSD remains a 1:1 on-campus (non-takehome) student-to-device district.
    - **Chromebooks**: Chromebooks are the district's standard 1:1 device for students in grades 2-12.
    - **Apple iPads:** iPads are the district's 1:1 on-campus device for students in grades K-1. By 2024 it is anticipated that all iPads in grades K-1 will be replaced with Chrome tablets.
    - **Staff devices:** Dell computers/laptops/tablets and Chromebooks are standard issued device for all staff. At a minimum, each staff member will be furnished with a Dell laptop or Chromebook.
    - **Printers:** Model-specific Brother or Epson printers are the printer manufacturers of choice for all work areas - office, classroom, common room, learning labs. In rare instances, HP printers can be purchased depending on needs.

- ***Software:*** The **i-SET** (Instructional Software Evaluation Tool) is used as a first step in purchasing teaching/learning software, digital programs, apps, or subscriptions to online platforms. Staff shall complete and submit the i-SET to PGTech for review to secure authorization for purchase. Any approved instructional software will be sanctioned for use in PGUSD and fully supported by PGTech.

- ***Supplies/Consumables:*** PGTech considers technology-related supplies/consumables (e.g. printer toner, batteries, projector bulbs, etc.) to be recurring operational expenses. Thus, these items should be purchased using non-technology funds (i.e. those dedicated for hardware and software). Neither Measure A/Ed-Tech Bond funds nor budgeted site technology funds are to be used to purchase technology-related supplies/consumables.

- ***Personal Devices On Campus:*** Staff personal devices are permitted for use on campus and can freely connect to the district's network. However, personal devices used on campus do not qualify for the same tech support that district-furnished devices receive. Furthermore, the district will not purchase accessories (e.g. adapters, charge cables, batteries, etc.) for personal devices.

Flexible Learning Lab

The vision for the **Flexible Learning Labs** (as outlined above in Area 1: Digital Learning and Literacy) is to create an active learning environment whereby students are given a space to explore, build, and create with project-based, hands-on, technology supported activities. At the elementary and middle levels, students will also use the "Flex Lab" to engage in hands-on STEM, Computer Science, Coding, and Robotics lessons. However, the Flex Labs can also be used in a larger capacity to facilitate lessons in other subjects such as math, science, and social studies, where small group, project-based learning is desired.

The key features contained in these modern and flexible learning spaces are first and foremost flexibility - modular furniture to encourage collaborative learning and adaptable/configurable layouts and arrangements to support a wide range of projects and content area lessons. When desired, the Flex Labs can also be easily configured to meet the educational needs of a more traditional classroom arrangement whereby desks and tables are organized in defined rows and columns; thus rendering the space more practical during direct instruction and/or independent testing.

Flex Lab Prototype Designs: Robert Down Renovation Layout V1 Video Forest Grove Renovation Layout V1 Video

Images retrieved from: https://www.viewsonic.com/amp/solution/21st-century-learning-viewsonic and https://www.emergingedtech.com, January 26, 2021