

Plainfield Technology Plan

2022-2026

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Section 1: Executive Summary

Thriving Through Technology Integration

Background and Context:

Technology is a central part of learning for all students. It is an essential tool for teachers to personalize and individualize instruction, meet students where they are in their learning journey and fill gaps in learning. Technology used to its potential can activate learning, provide access to the best resources and ideas available, and individualize instruction so that students are engaged and empowered throughout their career. Plainfield acknowledges the ever increasing influence of technology on learning and within all aspects of society. These realities create an urgency to design our technology systems to be robust and sustainable. Doing so will allow students, staff, graduates, and the community to benefit from the powerful learning available when using technology in meaningful ways. Students with equitable access to technology will leave Plainfield equipped with the modern skills of creativity, collaboration, communication, and critical thinking. To achieve this, we must craft all aspects of technology in the district to be reliable, secure, relevant to learning, and simple to use by all. The effective integration of technology by Plainfield will require the cooperation of all departments, as technology is now a part of everything that occurs in the district. The rapid transformation of teaching and learning is only possible when technology plays its essential role in the modern learning environment. Technology will continue to play an increasing role in society, and school is the opportunity for students to gain the skills and mindsets needed around how to use technology. Districts that properly invest in technology moving forward will position themselves to be leaders in areas like:

- Preparing Students for Future Jobs
- Engaging Students in Learning
- Deeper cross platform connections
- Easier flows of information
- Enhanced trust in systems and support of systems
- Increasing Teacher Retention
- Increasing Teacher Efficiency
- Providing access to Information and expertise
- Greater data and systems security

The Future of Technology in Schools

There has never been a time when so many areas of technology are set to disrupt schools, learning, work, and how we move through life. This reality makes technology integration an essential element of all future learning. In the next decade, the disruptive nature of virtual reality, augmented reality, the internet of things, machine learning, and artificial intelligence will be tremendous. We will have new ways to deliver 5G broadband to all places through a cornucopia of devices, and tools once reserved for a few students will expand to impact the

learning of most students. This includes: accessibility tools that support reading and math instruction, distance learning opportunities including the platform and content catalog, and where students learn as learning environments are modernized and more students learn from beyond the classroom.

Vision for Instructional Technology

- Vision Statement:
Technology is rapidly changing, and this requires Plainfield Public Schools to remain agile and nimble in how it uses its tools. To do this, the district should use the power of technology to engage student learning and provide personalized instruction that is responsive to student's present needs, interests, and future roles. This includes: the use of learning data results to improve teaching strategies, implementing research-based interventions, and a focus on modern learning skills all to improve student learning at scale.
- We envision students that:
 - Have ubiquitous access to technology
 - Respect the power of technology and recognize its limitations
 - Will be digitally literate and empowered citizens
 - Are accessing, and purposefully utilizing the technology tools and resources
 - Develop creation skills with technology to support their passion for finding an impactful role in society
 - Are prepared to be active responsible citizens of a technologically rich world and digital landscape
- We envision teachers that:
 - Allow students to engage in individualized educational experiences that inspire a lifelong love of learning and the critical thinking skills necessary for success.
 - Provide a safe and comprehensive technology environment that addresses the needs of all users.
 - Are skilled facilitators of an inquiry-based, student-centered learning environment,
 - Receive embedded professional development that supports the utilization and active exploration of technology as a tool for transforming teaching and learning.

Sustainability Recommendations

Technology hardware ages quickly. Districts can often find themselves chasing the budget and resources needed to maintain adequate systems. The goals outlined below are designed to move the district from adequate to optimal over the next three years.

- Reduce the age of all infrastructure hardware (servers, switches, access points) to less than five years old.
- Reduce the age of all users-based hardware (desktops, laptops) to less than four years old.
- Expand the number of access points in each building by 20% to provide more robust wireless

- Install modern visual displays (projector, panels, televisions) in at least 80% of academic spaces.
- Reduce the volume of printers in the district by 30%.
- Maintain the average age of student devices at three years.

All of the areas below should be on a refresh cycle and factored into the budget on an annual basis. These refresh cost estimates don't factor in areas that currently need initial purchases (visual displays, additional access points, etc.) Consider these refresh recommendations.

- Refresh 20% of printers annually based on age, service issues and cost per page
 - Based on current count of printers in district, this would be 30 printers at an approximate cost of \$400-\$800 per printer for an annual total of 12K-24K
- Refresh 20% of chromebooks each year
 - Based on the current number of students in the district this would be 420 devices at approximately \$255 per device for an annual total of 110K
- Refresh or Retire 20% of desktops each year
 - Based on the current count of desktops in the district this would be 100 devices at an approximate cost of \$800-\$1000 per device for an annual total of 80K-100K
- Refresh 20% of laptops each year
 - Based on current count of laptops in district, this would be 100 devices at an approximate cost of \$1000-\$1500 per device for an annual total of 50K-75K
- Refresh 20% of all classroom visual displays each year based on age and service issues until goal of 80% is reached
 - Based on the current count of visual displays in the district, this would be 15 devices at an approximate cost of \$800-\$2500 per device for an annual total of 12K-37.5K
- Refresh all servers, switches and access points every five years based on erate funding availability.
 - Based on latest estimates, switches and access points refresh will be approximately 300K and servers would be between 50-75K.

[Summary of Technology in District /Refresh Cycle](#)

Section 2: Review of Prior Goals

Overview

Since the adoption of the previous plan, much progress has been made on the prior goals that were aligned to the technology mission and vision. Even with the challenges posed by the pandemic that caused unique disruptions to teaching and learning, there have been areas of success as they relate to technology in the district. Through this review of goals, the committee also identified areas of current challenge. This process included listening to students and staff as well as reviewing data on areas of focus. This has allowed us to integrate prior areas of need, current areas of need and projected needs into the new goals.

Student and Teacher Skills

Great systems and availability of technology only realize their potential when they are used by students and staff that have the skills for productive use. The complexity of using technology for learning continues to grow, and this means that proficient use of technology isn't a fixed target, but one that continues to grow away from the current levels of proficiency for all in the district. Through the implementation of the previous plan, some progress was made, but it will take an intentional effort with time and resources allocated to continue to make progress in this area.

Progress Toward Goals

- 1:1 Chromebooks for students and teachers
- Updates to technology such as Vision boards
- Greater use of Google Classroom & technology in lessons
- Increase of teachers helping other teachers to share technology and programs
- Teachers and students have greater access to communication tools
- Teachers and students see power of technology for collaboration

Areas of Continued Challenge

- Finding staffing and time for student introductory classes for using technology
- Having appropriate staffing to complete timely device repairs
- Having best practice policies on devices including deposits/insurance
- Supporting students in the responsible handling/use of technology
- Using Google Classroom effectively (on teacher side)
- Creating common technology learning experiences

Professional Learning

Adult learning must be meaningful, on-going and relevant to the daily tasks happening in the classroom or office. This challenge was accelerated during the pandemic as the role of teaching and learning shifted and grew more complex. Though some success occurred, especially in the areas of teacher confidence and overall usage, many

felt a need for learning experiences that could ease the stress of the new technology-rich learning happening in person and in remote settings. Professional learning continues to be a shared responsibility between the learner and those who support the learner, and the ways of learning and gathering of knowledge on a topic have expanded tremendously.

Progress Toward Goals

- Funds are available for PD
- New ways of providing resources for teachers have been implemented
- Greater collaboration between teachers using technology has expanded
- Teachers are more comfortable with the basic uses of technology
- Individuals are learning beyond scheduled professional learning
- Greater efforts to personalize professional development are emerging

Areas of Continued Challenge

- Time and space for teacher learning remains limited
- Training for new staff is limited
- Teachers are asking for support and training
- Technology reliability impact teacher interest in trying new things that they learn
- Additional content development for professional learning is needed

District Policies

Alignment of district policies and practices as it relates to technology is essential. Through the guidance of the last technology plan, we have worked to unearth and review any disconnects in this area. Continuous review is essential as new areas of concern about the use of technology continue to grow. Districts that have thought through the language of policy, shared and explained with staff can get a more consistent, fair and impactful use of technology in all schools and classrooms. Procedures for accessing technology and the support to use that technology must be transparent and clearly communicated district wide. This efficiency will empower teachers to spend quality planning time on the purposeful integration of technology tools and skills into their curriculum. Below are some highlights on areas of growth and remaining challenges in this area.

Progress Toward Goals

- Requests for new programs and applications have a clear and understood procedure.
- Tech mentor positions were reinstated to support the communication of policies and practices.
- Procedures were tested during the pandemic and some remained robust and effective
- Procedures around cybersecurity were reviewed and enhanced.
- New informal procedures are being codified as documented policies and procedures

Areas of Continued Challenge

- Need for greater clarity about responsibility of student devices
- Need review of procedures on distributing technology
- Hiring procedures for IT need to be reviewed
- Greater participation in policy creation is needed
- Need to have clear and easy policies around teacher requests for support.
- Need to have clear and easy policies around teacher request for additional technology tools

Infrastructure

Modern school technology infrastructure includes both the hardware and humans to allow the systems to be effectively work. The prior plan focused on both of these areas. Access to technology, or the lack thereof, can lead to significant learning loss for students as more and more of the daily workflow occurs with and through technology. Access begins with access at school for teachers and students. Adding programs that demand more memory and speed requires more frequent refresh cycles to maintain high quality access as well as qualified individuals to support this work. In addition to school access, it is important that students can extend their learning beyond the walls of the school, and this requires home access to high speed internet. Along with these essential areas, accessibility also stretches into the programs and software being used. All students need to be able to access materials no matter their current level of academic readiness.

Progress Toward Goals

- Additional items were purchased to bolster deep infrastructure
- More devices are available and
- A replacement schedule is being developed and considered to create a stable supply chain
- Internet speeds and capabilities are being investigated and upgrades considered
- Review of personnel needed to run a robust technology team is being reviewed

Areas of Continued Challenge

- Multiple platforms to access information remains
- Repair times impacted by current staffing
- Issues with 1:1 device ratio remains
- Technology integration limited by lack of trainers and support personnel

Section 3: Goals and Action Plans

Overview

This plan will focus on the five goals outlined in this section. Each of these goals overlaps and interweaves with the other goals in the plan. They are ultimately a system of goals that rely on the success of the other goals to achieve individually. Notice three areas of goals emerge. The first area is the learning goals. They are foundational to the success of the plan. Changing systems, policies, procedures and buying things mean nothing unless the learning emerges stronger, changed and more robust. The second area is data and systems integration. Adding technology requires nesting technology including finding ways to access the data in multiple systems and login to systems with ease. These goals look to grow this area throughout the district to make technology and information access more effective and efficient. The third major area is goals around network and infrastructure. A strong core is essential for the long-term success of any district technology plan. These goals focus on upgrading systems, building systems life cycles and maintaining network safety.

Technology Goals

Goal 1- Teaching and Learning

Expand the skills and confidence around using current tools and resources

Goal 2- Data and Security

Student information including achievement data is protected and securely stored. This information will be readily available to teachers to guide instruction.

Goal 3- Infrastructure Capability and Sustainability

Manage technology in the district to meet current and future needs while maintaining a high level of quality access to technology and connectivity

Goal 4- Software and Licenses

Subscriptions and licenses at PPS are carefully chosen, reviewed, and readily accessible so that teachers can choose tools that support increases in student achievement

Goal 5- Communication/Policies/Procedures

Streamline procedures and policies around technology implementation and support so that teachers and students have the support necessary to integrate technology into their lessons

Goal One: Teaching and Learning

Goal Statement: Expand the skills and confidence around using current tools and resources

Goal One Tracking:

Action Steps	Connection to Student Success/ Strategic Goal Alignment	Start Date	Complete Date
Have robust learning options for teachers and leaders around technology tools	We shall engage all staff in the development of a comprehensive professional development plan that supports our student learning targets.	2022-23	Ongoing
Plan for purposeful integration of technology tools into the subject area /grade level curriculum and pacing guides.	We will provide modern learning spaces, technology tools, and school facilities that support the district vision and ensure student learning.	2023-24	Ongoing
Develop a CS curriculum K-12	If we design meaningful opportunities for students to design and shape their own learning experiences, then students will become increasingly self-directed, independent, and resourceful.	2023-24	2024- 2025
Develop a district wide data base for technology tools	We will purposefully invest and evaluate district resources, to ensure we will have the necessary talent, technologies, infrastructure and finances to promote student achievement.	2022-23	2024-2025
Identify and train teacher leaders/ tech mentors to assist with PD/ training	We shall increase our instructional capacity by engaging in peer coaching and professional learning communities to share best practices and increase reflection on current practice.	2022-23	Completed 2023 and Ongoing

Ensure all classroom teacher have the necessary skills to leverage blended learning in all classrooms	We shall increase our instructional capacity by engaging in peer coaching and professional learning communities to share best practices and increase reflection on current practice.	2022	2026
Design and offer effective personalized professional learning	We shall engage all staff in the development of a comprehensive professional development plan that supports our student learning targets.	2022-23	ongoing
Make district curriculum templates and documents available using a curriculum software program or Google Drive.	If we manage our resources and processes around a shared district vision supported by all stakeholders (Board of Education members, district leadership, educators, staff, and members of the community), then we will be able to support our strategic goals and ensure a positive culture and a Future Ready learning experience for all students.	2022-23	2023
Develop processes and procedures for professional development related to new programs and hardware.	If we ensure that the structures and systems are in place to develop individual and collective leadership knowledge, skill and will to advance instruction, then we will positively impact administrator and teacher practice to increase student achievement.	2022-23	2023
Offer Google Certification training during the summer.	If we ensure that the structures and systems are in place to develop individual and collective leadership knowledge, skill and will to advance instruction, then we will positively impact administrator and teacher practice to increase student achievement.	2022-23	2022
Develop capacity within each building to allow for the future train-the-trainer model.	We shall increase our instructional capacity by engaging in peer coaching and professional learning communities to share best practices and increase reflection on current practice.	2022-23	ongoing
Create taskforce to look at ways to grow creativity and problem solving through use of technology	We shall engage shareholders in a process of developing the district's core values and vision for ensuring all students can and will perform at high levels.	2023-24	2023-2024

Audit, review, and develop a digital citizenship learning continuum to provide common learning experiences for students.	We shall develop a districtwide understanding of “The active learner” aligned with our vision of a graduate through all course levels offered throughout the district, to engage students in reflecting on personal growth.	2023-24	2026
Develop a proficiency map of foundational student Technology skills at each grade span.	We shall provide structured time for staff to collaboratively review student achievement data and adjust programming.	2023-24	Implementation in 2025
Survey teachers and review technology standards to gain insight for the development of a K-12 technology skill checklist.	We shall utilize multiple forms for feedback to measure the engagement of our students	2022	Ongoing

Goal Two: Data Access and Security

Goal Statement: Student information including achievement data is protected and securely stored. This information will be readily available to teachers to guide instruction.

Goal Two Tracking:

Action Steps	Connection to Student Success/ Strategic Goal Alignment	Start Date	Complete Date
Ensure all district systems support current laws related to data privacy. Train staff on these systems.	We shall develop and communicate a clearly articulated continuous plan which includes a clear metric for measuring our success.	Summer 2022	training Fall 2022 ongoing
Maintain proactive cybersecurity measures	We shall Develop and communicate a clearly articulated continuous plan which includes a clear metric for measuring our success.	Summer 2002	ongoing
Create incident response plan for cybersecurity incident	We shall Develop and communicate a clearly articulated continuous plan which includes a clear metric for measuring our success.	Summer 2022	ongoing
Develop processes around data collection, storage, review that harness the most relevant and effective technology tools to make analyzing data efficient allowing for adjustments in instruction.	If we understand assessment and collect appropriate data on student performance and gather powerful instructional data, then we can utilize this data to monitor our student achievement goals, and adjust curriculum, professional development and resources as needed.	With selection of new SIS	Implementation of SIS
Create a shared system of student data relative to achievement.	We shall review and revise our structures for measuring, understanding and communicating student performance	2022	2022-2023
Implement student information system	We will purposefully invest and evaluate district resources, to ensure we will have the necessary talent, technologies, infrastructure and finances to promote student achievement.	2022	2023-2024

Goal Three: Infrastructure Capability and Sustainability

Goal Statement: Manage technology in the district to meet current and future needs while maintaining a high level of quality access to technology and connectivity

Goal Three Tracking:

Action Steps	Connection to Student Success/ Strategic Goal Alignment	Start Date	Complete Date
Develop policies and procedures around 1-1 technology in district	We will purposefully invest and evaluate district resources, to ensure we will have the necessary talent, technologies, infrastructure and finances to promote student achievement.	2022 -23	May 2023
Identify what types of devices should be used at what level	We will purposefully invest and evaluate district resources, to ensure we will have the necessary talent, technologies, infrastructure and finances to promote student achievement.	2022- 23	May 2023
Develop a sustainable supply chain for students devices	We will provide modern learning spaces, technology tools, and school facilities that support the district vision and ensure student learning.	2022-23	May 2023
Investigate Chromebook longevity processes (insurance, protection sleeves, etc.)	We will purposefully invest and evaluate district resources, to ensure we will have the necessary talent, technologies, infrastructure and finances to promote student achievement.	2022-23	May 2023
Investigate implementation of IT support	Ensure that support is available when district users need it the most	2022-23	ongoing
Reduce the number of manufacturers and types of devices in place throughout the district	We will provide modern learning spaces, technology tools, and school facilities that support the district vision and ensure student learning.	2022-23	ongoing
Expand impact of Learning Management System	We will provide modern learning spaces, technology tools, and school facilities that support the district vision and ensure student learning.	2022-23	ongoing
Review device options based on developmental appropriateness	We will provide modern learning spaces, technology tools, and school facilities that support the district vision and ensure student learning.	annual	annual

Goal Four: Software and Licenses

Goal Statement: Subscriptions and licenses at PPS are carefully chosen, reviewed, and readily accessible so that teachers can choose tools that support increases in student achievement

Goal One Tracking:

Action Steps	Connection to Student Success/ Strategic Goal Alignment	Start Date	Complete Date
Audit all technology subscriptions for use and impact	We will purposefully invest and evaluate district resources, to ensure we will have the necessary talent, technologies, infrastructure and finances to promote student achievement.	2021	annual
Review software purchases for impact	We will provide modern learning spaces, technology tools, and school facilities that support the district vision and ensure student learning.	2021	annual
Review software updates and patching for all systems	We will purposefully invest and evaluate district resources, to ensure we will have the necessary talent, technologies, infrastructure and finances to promote student achievement.	2021	annual
Develop and implement specific processes for adding new software and applications for learning	If we manage our resources and processes around a shared district vision supported by all stakeholders (Board of Education members, district leadership, educators, staff, and members of the community), then we will be able to support our strategic goals and ensure a positive culture and a Future Ready learning experience for all students.	2022	May 2023
Investigate to determine if we need to Switch to Google Enterprise or if current program is adequate	We will provide modern learning spaces, technology tools, and school facilities that support the district vision and ensure student learning.	2022	2023

Maximize use of Clever for SSO and rostering	We will provide modern learning spaces, technology tools, and school facilities that support the district vision and ensure student learning.	2022	2023
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Goal Five: Communication/Policies/Procedures

Goal Statement: Streamline procedures and policies around technology implementation and support so that teachers and students have the support necessary to integrate technology into their lessons

Goal Five Tracking:

Action Steps	Connection to Student Success/ Strategic Goal Alignment	Start Date	Complete Date
Implement systems to maintain a robust website	We will purposefully invest and evaluate district resources, to ensure we will have the necessary talent, technologies, infrastructure and finances to promote student achievement.	2021	Fall 2022 ongoing
Maintain connection between theory of action and technology support	If we utilize a purpose driven plan of continual improvement to communicate the district vision then stakeholders will understand their role in supporting all learners.	2021	ongoing
Foster more interconnected relationships between department around learning decisions	We shall develop a districtwide understanding of “The active learner” aligned with our vision of a graduate through all course levels offered throughout the district, to engage students in reflection and personal growth.	2021	ongoing

Continue to gather all ideas and resources around issues surrounding technology	We shall Develop and communicate a clearly articulated continuous plan which includes a clear metric for measuring our success.	2021	annual
Use survey data about learning during the pandemic to grow future technology programming	We shall develop a districtwide understanding of “The active learner” aligned with our vision of a graduate through all course levels offered throughout the district, to engage students in reflection and personal growth.	2021	annual
Develop a review process for technology plan that is ongoing and includes all voices	We shall engage shareholders in a process of developing the district's core values and vision for ensuring all students can and will perform at high levels.	2021	annual
Build modern systems for paperwork and forms for families and staff that includes fillable documents.	We shall identify and communicate roles for all stakeholders to contribute to the support of this vision.	2021	2023

Appendix A

Refresh Cycle Over 5 Years						
	Year 1	Year 2	Year 3	Year 4	Year 5	Annually
Chromebook	420	420	420	420	420	\$107,100.00
Desktops	100	100	100	100	100	\$100,000.00
Laptops	100	100	100	100	100	\$100,000.00
Interactive Displays	15	15	15	15	15	\$37,500.00
Servers	50-75K					\$25,000.00
Switches and APs	300K					\$60,000.00
Total						\$429,600.00
Technology in District						
School	PHS	PCS	PMS	MES	SHE	ECC/CO
Desktops	175	105	75	50	70	25
Laptops	225	75	60	65	65	30
Chromebooks	1100	675	430	280	315	20
Interactive Displays	25	40	30	30	20	10
Switches	28	9	8	4	4	3
Access Points	45	25	25	20	20	10
Printers	60	30	15	15	15	15