Ipswich Public Schools Technology Plan 2024-2027

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Executive Summary

Introduction

Ipswich Public Schools (IPS) are dedicated to equipping students and staff with essential technology and digital resources. The technology department's goal is to empower students to become global citizens proficient in communication, problem-solving, and information consumption, in line with our District Improvement Plan. The purpose of the Technology Plan is to create a common vision of the role technology will play when creating innovative learning experiences and environments. This plan identifies the challenges, possibilities, and opportunities technology and digital learning will provide us over the next three years.

In Massachusetts, District Technology Plans are not required but a process of documenting technology planning is recommended. While this is a three year document, we intend to review it annually to ensure its relevance with the latest in technology trends. When writing this plan, we referenced the 2024 National Education Technology Plan

(https://tech.ed.gov/netp/) for guidance when implementing effective use of technology to support teaching and learning.

The goals and action items outlined in this plan will serve as a roadmap for our district to provide purposeful and planned digital learning opportunities throughout a student's K-12 experience in Ipswich. They will be shared with administrators as a resource to be incorporated throughout current and future district documents. These include the Strategy for District Improvement, School Improvement Plans, and Elementary/Secondary Education Plans as recommended by DESE.

DESE Alignment
In 2023 Massachusetts DESE released an update to the Digital Literacy and Computer Science curriculum standards. These standards are broken up into four strands: Computing and Society, Digital Tools and Collaboration, Computing Systems, and Computational Thinking. They articulate a progression of knowledge and skills in digital literacy and computer science from Kindergarten to grade 12 and overlap other academic discipline standards, especially in the areas of science, technology, engineering and mathematics. These standards provide the drive for our educators to examine existing and create new curriculum resulting in the application and assessment of new experiences for our students. We acknowledge that the essential learning outcomes of the DLCS Standards are woven throughout all post-secondary opportunities and careers our students will encounter. Having the knowledge, skills and dispositions to not only use technology but to enable it as a creative tool to solve complex problems is an essential literacy skill our students must now graduate with.

Budget
In collaboration with the technology team and district administration, the Director of Technology develops a budget annually that includes staffing, infrastructure, hardware, software, services, new initiatives, professional development, supplies, and support for the district. In addition to the appropriated budget, other funding sources may include the Town of Ipswich Capital Plan, choice monies, and government sources such as ERate and other grants. Additionally, IPS employees have the option of writing Paine and Edmund Traverso-Robert Weatherall Innovation Grants. These are offered to educators who have an innovative idea to enrich and enhance the student learning experience. Many of these serve as alternative funding sources for technology purchases outside of the school budget (although refreshing these technologies falls within the IT appropriated budget).

Staffing
IPS employs the following Technology Staff:
- 1 full-time (12 month) Director of Technology
- 1 full-time (12 month) Data Manager
- 1 full-time (12 month) Help Desk/Applications Manager
- 1 full-time (12 month) Network/Systems Administrator
- 1 full-time (10 month) Digital Learning Specialist

2024 Technology Department:
Keith Borgen, Director of Technology
Jim DePue, Data Manager
Jim Evans, Help Desk/Applications Specialist
Bill Ford, Network/Systems Administrator
Amy Gregory, Digital Learning Specialist

Technology Plan Categories Overview

Categories	Goals
Infrastructure & Security	Ensuring a secure and reliable technology infrastructure to support the needs of our school community, both in and out of the classroom.
Hardware, Access & Services	Providing equitable access to wireless connectivity and IT hardware devices, including iPads, Chromebooks, laptops, and classroom technology tools.
Data	Leveraging data collection platforms and analysis tools to support informed decision-making and enhance student learning outcomes.
Educational Software	Selecting, implementing, and managing educational software programs that align with curriculum standards and promote student engagement and achievement.
Learning & Support	Promoting effective technology integration through professional development, support services, and digital citizenship initiatives for educators and students.

By addressing these key areas, the Technology Plan aims to foster a culture of innovation, collaboration, and lifelong learning within Ipswich Public Schools, ultimately preparing our students for success in the digital age.

Technology Plan Category: Infrastructure & Security

Goal: Ensuring a secure and reliable technology infrastructure to support the needs of our school community, both in and out of the classroom.

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
1.1-Cybersecurity	- Educate staff on data privacy, and cybersecurity. - DLCS privacy and security strand for students. - Protective measures in place to prevent intrusions, compromises, attacks.	- Using a combination of IT staff in-person training along with training from KnowBe4 to educate staff. - Training students annually in Digital Literacy and Safety. - Firewall and Antivirus software in place, updated regularly. Security audit and penetration tests pending.	Director of Technology Digital Learning Specialist Classroom Teachers
1.2-Documentation	- Computer use agreements. - Technology Plan and related documents. - Trainings - Other documentation as required.	- Staff CUA is in place with annual mandatory training. - Revised Student CUA Revised agreement pending approval. - Training documentation available for many applications and services (Aspen, Google, etc.)	Director of Technology Digital Learning Specialist
1.3-Internet Access and Filters	- Internet access in all buildings. - Traffic is filtered for appropriate use and content in and out of buildings.	- WiFi access points in every classroom. Fiber between buildings and closets. - Three types of content filtering in place at different layers in buildings and two types outside of IPS.	Technology Department
1.4-Firewalls	- Intrusion prevention. - Update firewall to address any new threats that emerge.	- State-of-the-art firewall with SWA licensing - Threats updated regularly. Firewall firmware updated every vacation.	Technology Department
1.5-Storage	Provide secure storage for all district information.	A combination of physical and cloud storage is used currently.	Technology Department

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
	• Ensure appropriate access through the use of permissions. • Regularly audit permissions to ensure security of information.	• On-site permissions controlled by IT. Cloud permissions are governed by cloud storage rules. Training for IPS employees in cloud storage security. • Annual review of permissions both local and cloud. Not perfect but very good.	
1.6-Recycling	• Explore cost-effective methods of leveraging retired devices. • Explore methods of effectively disposing of retired devices that can't be leveraged.	• When possible, IPS participates in a vendor buyback program. Parts from retired devices (old screens, etc.) used to repair existing devices. • IPS works with a device removal company to ensure safe/responsible disposal of equipment.	Technology Department

1.7-Redundancy / Disaster Recovery	• Provide redundancy for all:
	  ○ Applications
	  ○ Systems
	  ○ Storage
	• Provide disaster recovery planning.
	• Execute disaster recovery tests to ensure redundancy.
		• Redundancy:
		  ○ Most applications migrated to the cloud for redundancy.
		  ○ Networking/Server/Storage systems are redundant through teaming, spares, or maintenance agreements. All others cost prohibitive.
		  ○ Local storage redundant with offsite backups. Cloud storage maintained by the vendor.
		• Revision of disaster recovery plan in the process.
		• Fire Alarm testing in summer.
			Technology Department

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
1.8-Communication	- Provide and support communication channels to notify district stakeholders with timely information in a user friendly format. - Migrate Blackboard website to Finalsite. - Support digital translation.	- Blackboard Connect, Aspen, Smore, Family ID provided and supported. - Transition in process, delivery expected by Summer 2024. - Google Translate, Aspen Translate, Smore, and Talking Points are in place.	Technology Department
1.9 Professional Development	- Ensure the IT staff remains current on the latest technology. - Investigate new opportunities for using technology to further the district mission. - Stay abreast of the latest security mandates and cyberculture in order to protect IPS effectively.	- Professional development included in the budget for additional training in new technologies. - Vendor relationships that allow for training while implementing new solutions. - Leveraging educational consortiums and other groups to stay current with technology trends in education (classroom, security, policies, etc.).	Technology Department

Technology Plan Category: Hardware & Access

Goal: Providing equitable access to wireless connectivity and IT hardware devices, including iPads, Chromebooks, laptops, and classroom technology tools.

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
2.1-Student Devices	- iPads - Chromebooks	- iPads: K, 1, 2 - Chromebook Carts: 3-5 1-to-1 Chromebooks: 6-12	Technology Department
2.2-Staff Devices	- Laptops - Desktops - Chromebooks	- Laptops for Staff/Faculty - Desktops for Secretaries/IT - Chromebooks for non-employees (interns, etc.)	Technology Department

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
2.3-Classroom Hardware	• Projectors • Display Panels • Document Cameras • Printers	• Projectors or display panels (depending on application) in most classrooms/meeting rooms. • Document Cameras, Printers, Speakers, Microphones, and other peripherals as needed in classrooms.	Technology Department
2.4-Other hardware	• Phones • PA Speakers • Hotspots • Copiers	• Phones/PA speakers are available in all rooms. • Hotspots available for constituents on an as-needed basis. • Color and BW copiers are available.	Technology Department

Technology Plan Category: Data

Goal: Leveraging data collection platforms and analysis tools to support informed decision-making and enhance student learning outcomes.

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
3.1-Digital Assessment Software	• Support administrators and teachers on the implementation of data collection assessment digital tools.	Ex. Renaissance, Lexia, iReady, Amplify: • Roster and maintain student and teacher accounts in data assessment digital tools. • Work with principals to provide data reports as needed. • Manage program settings, and provide needed support and troubleshooting to educators. • Serve as liaison with vendors to organize PD, and troubleshoot. • Export and share data as requested.	Technology Department Director of Teaching & Learning Digital Learning Specialist

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
3.2-Single Sign-On Software Management	● Provide a rostering solution integrated with the student information system to facilitate timely rostering of edtech applications. ● Provide an integrated system to simplify the use of multiple edtech accounts to allow for seamless access for educators and students K-12. ● Provide a system allowing for analysis of software usage and application.	● Onboard Classlink to simplify rostering and account provisioning for the many digital tools we approve. ● Work with classroom teachers and students to log in to programs using Classlink. Set up and create accounts for a K-2 pilot group in 2024. ● Create a single sign-on a platform for teachers and students. ● Use analytics to inform future purchasing.	Director of Technology Data Manager Digital Learning Specialist
3.3-Data Dashboard	● Identify specific needs around data collection and analysis to inform dashboard definitions ● Explore the existing tools available to provide administrators and educators multiple student assessment data points in one location.	● Continue to experiment with Google Looker Studio capabilities. ● Attend professional development around data collection. ● Explore outside vendors and what they are capable of creating in hopes of replicating a solution for IPS.	Director of Technology Data Manager Director of Teaching & Learning

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
3.4-Priority Matrix	● Prioritize technology initiatives appropriately.	● Create a weighted document with the following criteria: Enhancing learning, improving instruction, scalability and reusable effort, Learning curve, cost,and length of time.	Director of Technology

Technology Plan Category: Software

Goal: Selecting, implementing, and managing educational software programs that align with curriculum standards and promote student engagement and achievement.

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
4.1-Educational Software	● Research, evaluate, recommend new technologies to support teaching and learning. ● Work with vendors to ensure best pricing while monitoring usage and training opportunities.	● Use information from SDPC to address concerns related to student data. ● Identify criteria for free and paid software usage for staff and students. ● Create and maintain a resource document of district-approved and supported software: Digital Tools Playbook.	Digital Learning Specialist
4.2-Productivity Software	● Research, evaluate, negotiate, purchase, and support technologies required for all business and staffing needs. ● Work with departments on application needs ● Manage vendors as required.	● Regular meetings with administrators and tech team to manage needs and benchmark SLAs. ● Maintain good relationships with vendors through regular communications, conferences, and feedback. ● Manage new initiatives	Technology Department

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
		with a focus on increasing productivity (Classlink, website, scholarships, etc.).	
4.3-Software Implementation	• Create a systematic procedure for requesting and approving/denying software. • Create a protocol to examine the sunsetting of software.	• District employees can request software use whether free or paid through email, grants, and Incident IQ. • A formal plan will be created when evaluating renewals of software. Considerations such as usage reports, value, relation to standards, and adoption across departments/grades will be considered.	Director of Technology Digital Learning Specialist
4.4-Classlink	• Provide an integrated system to simplify the management of many edtech accounts to allow for seamless access for educators and students.	• Pilot dashboard with 6 K-2 teachers and students at Doyon & Winthrop. • Launch for K-12 staff and students.	Director of Technology Digital Learning Specialist
4.5-Artificial Intelligence	• Provide staff and students with guidance around Artificial Intelligence use. • Revisit guidance as needed to ensure up-to-date guidelines.	• Write AI guidelines for all IPS stakeholders. • Gather and apply feedback from administrators, and tech committee educators. • Present to all staff at faculty meetings. • Add AI guidelines in the Student Computer Use Agreement. • Add AI approved tools in Digital Tools Playbook. • Recommend principals add AI guidelines in	Director of Technology Digital Learning Specialist

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
		the 24-25 School Handbook.	

Technology Plan Category: Learning & Support

Goal: Promoting effective technology integration through professional development, support services, and digital citizenship initiatives for educators and students.

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
5.1- IT Department Support	● Provide technology support to staff that is easy to access and provides updates towards a resolution.	● Continue full transition to staff support ticketing system IncidentIQ. ● Add custom fields to match the needs of IPS.	Technology Department
5.2-IT Department Outreach	● Provide staff with updates on technology information and resources.	● Use Smore software to send out a technology update newsletter.	Director of Technology Digital Learning Specialist
5.3-Professional Development	● Provide access to high-quality professional development focused on effective technology integration throughout the curriculum.	● DLS certified Google Coach for support, modeling, and co-teaching. ● PD Day technology session(s). ● Tech Tips at Faculty Meetings. ● Faculty Meetings dedicated to technology updates. ● Mentee Meetings & New Teacher Orientation.	Digital Learning Specialist Director of Teaching & Learning
5.4-Technology Committee	● Support and oversee educators in leadership	● Maintain staff website for district technology integration resources-	Digital Learning Specialist Technology Committee

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
	technology roles in all four schools.	○ Ipswich Tiger Tech Website ● Pilot new digital tools. ● Conduct professional learning for staff.	Members
5.5-Digital Citizenship	● Oversee integration of digital citizenship standards into existing curriculum and classes.	● DLCS standards are addressed through Common Sense Media curriculum, currently in curriculum review cycle.	Digital Learning Specialist DLCS Compass Team Classroom Teachers
5.6-DLCS Standards	● Continue the integration of MA Digital Literacy Computer Science Framework (DLCS) into core content instruction.	● Unpack the updated DLCS standards ● Complete a standards inventory and report to the Director of Teaching & Learning. ● Collaborate with teachers to identify specific units/lessons to include DLCS standards within curriculum documents. ● Collaborate with DTL, department chairs, team leaders, and admin to update curriculum to include outstanding DLCS standards not found in standards inventory.	Digital Learning Specialist Director of Teaching & Learning DLCS Compass Team Grade Level Team Leaders
5.7-Google Workspace	● Stay current on Google Workspace Certifications ● Shared Drives	● Remain Google Workspace Certified Educator, Trainer, and Coach. ● Turn on Shared Drive functionality for district educators, and offer usage training. ● Create district-shared drive folders for departments/grade levels and move completed UbD units to folders.	Digital Learning Specialist Director of Teaching & Learning Administrators

Areas of Responsibility	Deliverables	Specifics	Responsible Parties
5.8-Accessibility	● Offer assistive technology products, software, and solutions to staff and students to increase and enhance the learning of a person with disabilities.	● Create and maintain an [Assistive Technology Digital Tools Playbook](#) for educators to ensure awareness of tools. available to be embedded into teaching and learning for students. ● Attend professional development to stay up to date on latest trends and tools around AT. ● Support program managers, assistant principals, counselors, and special education teachers when developing student 504 or IEP plans that include AT.	Digital Learning Specialist

Appendix

Glossary
DESE: Department of Elementary and Secondary Education
DLCS: The Massachusetts Curriculum Framework for Digital Learning Computer Science
Massachusetts Student Privacy Alliance: The MSPA is a collaboration of Massachusetts school districts that share common concerns around student privacy. The goal of the MSPA is to set standards of both practice and expectations around student privacy such that all parties involved have a common understanding of expectations.
SDPC: Student Data Privacy Consortium

Agreements:
Access to Digital Resources IJND
Empowered Digital Use Policy IJNDB
Social Media Policy IJNDD
Student Email Access Grades 6-12 IJNDE
Staff Computer Use Agreement
Updated Student Computer Use Agreement (Pending Approval)

Documents
Digital Tools Playbook (current)
Assistive Technology Tools Playbook
AI Guidelines for Staff
AI Guidelines for Students

Members:

Technology Specialist Committee (Current)
Facilitator: Amy Gregory

High School	**Middle School**
Colleen Cavanagh	Jenn Couto
Ginger Fritz	Deb Davidson
Bruce Mabbott	Kara McLeod

Paul F. Doyon Memorial School	**Winthrop School**
Teresa Hohenstein	Keith Archung
Kerrie Janvrin	Lauren Gouzie-Fonvielle
Jena Woodworth	

DLCS Standards Compass Committee (Current)
Amy Gregory
Kim Meaney
Lisa Nylen