

2019 - 2023

FRIENDSWOOD ISD TECHNOLOGY PLAN

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TECH PLAN

MISSION: FOSTER A CULTURE THAT
USES INTEGRATED TECHNOLOGIES TO
OPTIMIZE STUDENT LEARNING.

EXECUTIVE SUMMARY

The 2019-23 Friendswood ISD Technology Plan was written and agreed upon by members of the Technology Plan Committee. Representatives from each campus and various departments serve on the committee. The planning process was designed to include a variety of perspectives, ideas, and experiences. This wide representation is needed to foster buy-in from all stakeholders.

The 2019-23 plan is designed to align with the district strategic plan while addressing areas specific to technology infrastructure, safety, support, instruction and communication. These areas provide a road map for the district to: meet hardware and software standards; support and maintain district technology efficiently and effectively; achieve technology proficiency by students and staff; optimize student learning through the use of integrated technologies and communication. This plan attempts to lay a foundation for future advancement in the use of integrated technologies.

Because the plan continues to move the district in significantly new directions, the district felt it would be wise to write a three-year plan. The plan identifies technology resources that should be available to all stakeholders as well as the support for those technologies. It focuses on technology integration into the classroom and technology proficiency standards for students and staff. The planning process resulted in numerous discussions, each one further defining the aspirations of the district, and therefore the plan.



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EXISTING CONDITIONS

- It is important to understand the existing condition of the instructional, technical and PEIMS/Data departments.
- The Executive Director of Technology directs and manages the Instructional, Technical and PEIM/Data departments in Technology Services. The technical and PEIMS/Data departments have a director or coordinator and additional staff under the direction of the Executive Director of Technology.
- Grades 2-12 at all campuses have Chromebook carts in core classrooms and libraries. In grades K-2 there are sets of 12 to 24 iPads available in each classroom.
- Each teacher is provided a laptop to use with a projector and document camera in each classroom. There are a handful of interactive projectors in various schools as well as half a dozen interactive panels throughout the district.
- District internet bandwidth is currently 1GB and will be updated to 1.5GB in the 2019-20 school year.
- Students use a variety of educational software including GSuite for Education, PebbleGo, BrainPOP, Reading Horizons, Cinch Science, Canvas, Q-Global, Read Naturally, SeeSaw, Reading Plus, Imagine Math, Accelerated Reader, EduTyping, and many more.
- The district has invested in several online textbooks: Pearson for Spanish, Anatomy, Bio, and AP Physics; McGraw Hill for Math and Science in grades 6-8, Social Studies in grade 6-12 and Accounting; Think Central for Math and Social Studies K-5; Social Studies Weekly for grade 4; Stemsopes for Science in K-5; Bedford, Freeman and Worth for AP Biology, AP European History and AP World History; Cengagebrain AP Chemistry & DHO Health Science; Cambridge for Latin I - III; Bolchazy-Carducci for Latin IV & V; Houghton Mifflin/McDougal for Chemistry, Physics and World Geography; Vista Higher Learning for German and French.
- Each campus has a fiber connection to the annex building.
- Web content filtering will be upgraded to Family Zone in the summer of 2019 to allow for up to 10GB throughput, cloud filtering and SSL decryption.
- The Firewall will be upgraded to Fortigate in the summer of 2019 to allow for up to 10GB throughput and updated firewall features.
- All core and many non-core classrooms have a laptop or desktop computer, mounted projector or interactive projector/panel, and document camera.
- All campuses, Annex and Administration Building have Aruba wireless access throughout.
- The district uses Skyward for student information management, HR and financial accounting.
- The district uses Bradford for student registration, onboarding, to the BYOD network.
- All staff has email and electronic communications access at work or anywhere including apps built for iOS and Android via GSuite for Education.

EXISTING CONDITIONS CONT.

- All teachers use an electronic gradebook in Skyward.
- All teachers use Skyward for attendance.
- The district uses BoardDocs.com, an electronic school board meeting management solution.
- Teachers report absences and request substitutes using Frontline.
- Scope and Sequence of all grade-level and content area TEKS are available in the TEKS Resource System for all teachers.
- Staff participates in online professional development through EduHero.net.
- Parents of students in grades K-12 have access to students' grades and attendance using ParentAccess in Skyward.
- Canvas LMS is used for digital delivery of classroom content, communication and online testing.
- The district uses Follett Destiny library management software, implemented in 2009 and recently updated in 2019.
- The district uses Eduphoria Workshop to offer and monitor staff development hours implemented in 2012.
- The district uses Eduphoria Aware for test data disaggregation implemented in 2011.
- The district uses Eduphoria Strive for staff M-TESS evaluation process.
- The district uses Eduphoria HelpDesk to submit and track technology help requests implemented in 2013.
- The district uses Eduphoria FormSpace for teachers and campuses to request approval for outside and campus workshops, surveys and forms implemented in 2013.
- The district is a member of the Region 4 Videoconferencing Network with desktop access to trainings and learning experiences provided by Region IV.
- SSO via Google or Canvas is provided for most of the online resources with links embedded in Canvas courses for all grades and displayed on an auto-open Clever dashboard for Chromebook users in grade 2-5.



TECHNOLOGY NEEDS

The Technology Plan Committee defined the technology-related goals, objectives, and strategies to support the strategic plan of the district. Each technology plan goal is linked to and supportive of a district goal. These goals focus on the use of technology to enhance, support and facilitate all levels of learning, instruction, communication, and administration. This technology plan attempts to address the areas of greatest need, Infrastructure, Support, Teaching & Learning, Safety, and Communication.

Goals 1 and 2 address the technology infrastructure and layout a path to increase bandwidth capabilities and reliability. These two goals directly support the district's strategic plan goals 1 & 5: We will develop a district-wide system that establishes a culture of community service for all students. We will strategically allocate resources for facilities that promote authentic learning experiences and real-world opportunities. It is widely believed that the district has a reliable network. Access to quality technology, however, is not viewed consistently throughout the district. By investing in more robust equipment that allows for the growth of our infrastructure and bandwidth we are preparing for what the future might bring in the area of network access and needed capabilities.

In Goal 3 the support of the end user is addressed through proactive and responsive support systems for all stakeholders. This goal supports goal 3 in the district's strategic plan: We will provide professional learning that is aligned to our beliefs and call to action. As technology is ever changing so should our role in supporting the devices and people using the technology. Analyzing statistics will allow the support staff to be proactive in the areas of facilitation, support, and training.

Goal 4 in the technology plan supports several of the district's strategic goals. In addition to the district's strategic goals previously mentioned, the technology plan's goal 4 supports goals 2, 6 and 7 of the strategic plan: We will redefine the measure of student success based on our beliefs and call to action. All students will be engaged in authentic learning experiences in and beyond the classroom. We will develop initiatives that promote strong character traits, emotional maturity, and social well-being of each child. The objectives in goal 4 address researching best practices with digital instruction; providing resources and intentional training that embraces creativity, critical thinking, communication and collaboration; and increasing the pattern of responsible technology use where all learners are authentically engaged. All three provide a means to continue integrating technology meaningfully and authentically into the curriculum.

In the technology plan Goal 5 addresses safety with technology. Safety as a goal is a much-needed addition to the district technology plan. It is divided into two categories, Digital Citizenship, and Data Safety. Digital Citizenship addresses student safety and behavior online while data safety maps out what the district is doing to keep personal data secure. Goal 5 of the technology plan supports goal 7 of the district's strategic plan: We will develop initiatives that promote strong character traits, emotional maturity, and social well-being of each child. Digital Citizenship has been a focus for several years and through the technology plan, it will continue to be developed to best suit the needs of our students and community. The second part of Safety, Data Security, is an ever-changing area that should be addressed in any technology plan. With today's cyber attacks more frequently targeting perceived weak targets housing desired data, such as school districts, it is important to keep infrastructure secure and staff trained on identifying phishing scams.

Goal 6 is communication. This goal supports goal 1 in the district's strategic plan: We will develop a district-wide system that establishes a culture of community service for all students. The technology department has historically played a key role in supporting digital communication between the school and the community. Methods of digital communication change frequently. The technology plan supplies a structure to follow when evaluating new digital communication methods and provides a plan to provide staff information and development on new communication mediums. This also supports communication within the district regarding the availability of equipment and services for staff.

NEEDS ASSESSMENT

The district uses formal technical needs assessments tools to analyze district technology needs. Along with the technical needs assessment, survey tools are used to collect and analyze data regarding district technology-related needs. Staff members are surveyed on a variety of areas. Survey instruments include questions related to the following areas: Organizational conditions; flexible scheduling; staff support; instructional materials; professional development; communication and student outcomes. The district uses the Eduphoria Help Desk application for processing instructional and technical tickets. This tool is used to log and track work done by technical support. Using this tool along with survey results, the district gains insight into the current status of technology and allows for future planning.

Goals and Objectives

INFRASTRUCTURE 1 & 2

Supports Strategic Plan Goals 1 & 5 - We will develop a district-wide system that establishes a culture of community service for all students. We will strategically allocate resources for facilities that promote authentic learning experiences and real-world opportunities.

Goal 1

We will continue to provide advancing infrastructure solutions that can scale with our district's demands.

Objective 1.1 Evaluate data usage trends via a monthly report with correlation of district activities including teaching and instructional activities.

Objective 1.2 Collect teacher response surveys twice per year in regards to usage and experience in the classroom; survey will include but will not be limited to current lifespan of devices; evaluation of 1-1 devices vs class sets

Objective 1.3 Define upgrade path to include end of life and sunset on district systems

Goal 2

We will deploy fault-tolerant technology to increase reliability.

Objective 2.1 Install a ring topology, or a similar technology, to provide exceptional network connectivity throughout the district.

Objective 2.2 Research trends of multipoint networking in order to provide equipment that can handle the projected internet usage.

INFRASTRUCTURE 1 & 2

Strategy Description	Monitor	Expected Result	Year 1	Year 2	Year 3
1.1.1 Establish and implement a monthly reporting schedule to collect data.	Network Administrator, Dir. of Technical Services, Ex. Dir of Tech.	Report established and would drive decisions on upgrading and maintaining district applications to ensure quality.	✓		
1.2.1 Create and distribute a mid-year checklist annually to evaluate teacher & student experiences in the classroom.	Ex. Dir of Tech.	The mid-year checklist will provide data that improve the quality of classroom technology experiences.	✓		
1.2.2 Create and distribute an annual end of year survey to collect more in-depth data in regards to usage and experience in the classroom.	Ex. Dir of Tech.	The end of year survey will provide a pathway for readiness for the upcoming school year..	✓		
1.3.1 Develop a timeline and replacement process for FISD technology including but not limited to Chromebooks, staff computers, and other electronic instructional devices.	Network Administrator, Dir. of Technical Services, Ex. Dir of Tech.	This would ensure up to date and secure technology for staff and students.	✓		
1.3.2 Develop a standard device list for core technology items purchased for a campus.	Network Administrator, Dir. of Technical Services, Ex. Dir of Tech.	List is in place and updated annually during the summer.	✓		
2.1.1 Post a 470 with E-rate for an infrastructure design with a ring topology by December 2019 and select vendor for implementation.	Dir. of Technical Services, Ex. Dir of Tech.	This post will allow bidders to submit a proposal for new design and the technology department will work with vendor.	✓		
2.1.2 Evaluate proposals and acquire necessary equipment and services to convert the district to a ring topology or similar technology.	Dir. of Technical Services, Ex. Dir of Tech.	Final proposal selected and approved by the board..	✓		
2.1.3 Ring topology, or similar technology acquired and installed in the district	Dir. of Technical Services,	District ring or similar infrastructure in place to provide increased network reliability	✓		
2.2.1 Have a quarterly technology meeting to stay ahead of new needs, equipment and internet usage.	Network Administrator, Dir. of Technical Services, Ex. Dir of Tech., iCoaches, Media Specialists	This meeting would help the district stay current, share ideas, and anticipate needs.	✓		

GOALS AND OBJECTIVES

SUPPORT

Supports Strategic Plan Goal 3 - We will provide professional learning that is aligned to our beliefs and call to action.

GOAL 3

We will provide proactive and responsive support systems to learners, facilitators and community.

Objective 3.1 Analyze statistics and currently available information to measure district balance and effectiveness between proactive and responsive support.

Objective 3.2 Develop proactive maintenance and training to effectively access and utilize technology tools.

Objective 3.3 Develop responsive processes to effectively and efficiently serve stakeholder needs.



SUPPORT

Strategy Description	Monitor	Expected Result	Year 1	Year 2	Year 3
3.1.1 Create or acquire a database to centralize a district asset inventory system.	Tier 2 District Tech and Campus Technicians	Accurate and useful inventory information for needs assessments.		✓	
3.1.2 Analyze support tickets monthly for quantity and frequency of equipment issues.	Network Administrator	This would help tech services gage support activity.		✓	
3.1.3 Survey stakeholders on experience with technical support.	Ex. Dir. of Technology	Survey completed and results used to address trends.		✓	
3.2.1 Research and implement a system to manage computer-compliance with updates and District software requirements	Network Administrator	System in place and client workstations manage their own compliance.			✓
3.2.2 Perform inventory audits annually	District Tier 2 Tech & Campus Technicians	Audit plan in place and conducted annually			✓
3.2.3 Provide short trainings during PLC or Faculty meetings on “how to”, troubleshooting and proactive practices	Campus Administrators, Campus iCoaches	Staff is provided troubleshooting and proactive practices throughout the year		✓	
3.2.4 Provide access to online “how to” training that staff can access when needed	Ex. Dir. of Technology	Online system is provided and promoted through campus technology support			✓
3.3.1 Evaluate ticket system to assure usefulness and effectiveness.	Network Administrator & District Tier 2 Tech	System evaluated and updated or confirmed useful and effective.		✓	

Curriculum/Learning/Instruction

(Supports Strategic Plan Goals 1, 2, 5, 6, & 7 - We will develop a district-wide system that establishes a culture of community service for all students. We will redefine the measure of student success based on our beliefs and call to action. We will strategically allocate resources for facilities that promote authentic learning experiences and real-world opportunities. All students will be engaged in authentic learning experiences in and beyond the classroom. We will develop initiatives that promote strong character traits, emotional maturity, and social well-being for each child.)

Goal 4

We will promote a culture which fosters creativity, communication, collaboration, and critical thinking through the responsible use of technology.

Objective 4.1 Research current/best practices on digital instruction and conduct needs assessment research by soliciting formal and informal feedback.

Objective 4.2 Provided resources and intentional training that promotes a culture which embraces creativity, critical thinking, communication, and collaboration.

Objective 4.3 Increase the pattern of responsible classroom use where all learners are authentically engaged in technologically enhanced experiences.



Curriculum/Learning/Instruction

Strategy Description	Monitor	Expected Result	Year 1	Year 2	Year 3
4.1.1. Create a formal survey which evaluates current technology trends in classroom use.	Needs Assessment Committee, Campus iCoaches	A formal survey and documentation of district, campus, department practices is.		✓	
4.1.2. Collect available data from industry for desired learner skills and development.	Ex. Dir. of Technology, Campus iCoaches	List of industry needs		✓	
4.1.3. Compare and contrast educational practices with industry desires.	Ex. Dir. of Technology, Campus iCoaches	Create documentation of the gaps between industry and current educational practices			✓
4.2.1. The technology department will educate staff on Technology Application TEKS through a variety of professional development opportunities (K-8/9-12).	Ex. Dir. of Technology, Campus iCoaches	Education through (but not limited to) TCEA sharing, monthly newsletters, PLCs, summer workshops, lunch and learns.		✓	
4.2.2. Grow in understanding and knowledge of technology-curriculum integration (by campus).	Campus iCoaches	Teacher workshops on technology expectations and levels of integration into content specific curriculum		✓	
4.3.1. Develop a uniform age-appropriate expectation of what technological engagement looks like in the classroom.	Campus Administrators, Campus iCoaches	Utilization of highly engaging Technology Applications skills in the curriculum		✓	
4.3.2. Promote a portfolio/repository space for evidence of learner enhanced technology use	Ex. Dir. of Technology, Campus iCoaches, Campus Administrators	Administrator accessible repository of student products			✓

SAFETY

(Supports Strategic Plan Goal 7 - We will develop initiatives that promote strong character traits, emotional maturity, and social well-being of each child.)

GOAL 5

We will provide a safe and secure digital learning environment that will protect the district and ensure safe practices for digital safety.

Objective 5.1 Provide a current CIPA compliant filtering system that allows for class monitoring and control.

- Research current filters available
- Filtering system that allows for teacher discretion
- VPN, SSL
- Updatable Filter

Objective 5.2 Maintain current student and staff Responsible Use Policies.

- Current research
- Reflect current state policies
- Training on current policies (both staff AND student policy)

Objective 5.3 Ensure that students, staff, and community have access to resources to promote digital citizenship for each student.

- Survey students, staff, parents to assess digital safety knowledge & needs
- Teach students explicitly/ seamless Training for staff
- Resources for parents/community members
- Assess curriculum for safe practice teaching

Objective 5.4 Put protocols into place to ensure safety of digital content.

- Passwords
- Teacher training
- Research trends
- Penetration Test

SAFETY

Strategy Description	Monitor	Expected Result	Year 1	Year 2	Year 3
5.1.1 Research current, CIPA compliant filters that allow for SSL decryption and VPN blocking that will continuously grow and adapt to changing needs.	Dir. of Technical Services	Research is completed and filter selected.	✓		
5.1.2 Provide systems that allow for teacher monitoring and device management when using various devices online.	Ex. Dir of Technology	Online monitoring systems are in place for all devices and all grade levels	✓		
5.2.1 Develop a uniform presentation to educate staff on the expectations of the staff RUP and review for changes annually.	Ex. Director of Technology	Presentation is created and shared.		✓	
5.2.2 Develop a uniform presentation per campus level to educate students on the expectations of the RUP and review for changes annually.	Ex. Dir. of Technology	Presentation is created and shared.		✓	
5.2.3 Educate all staff and students on RUP expectations annually.	Ex. Dir. of Technology, MIS & iCoach, Campus Admin	All staff and students are educated.		✓	
5.3.1 Create and deploy a survey that assesses knowledge of digital safety/citizenship to staff, students and community.	Ex. Dir. Tech., Tech Needs Assessment Committee	Survey deployed and results collected			✓
5.3.2 Redesign current digital safety/citizenship curriculum for effectiveness and seamless integration into current class content.	Ex. Dir. of Tech, iCoaches, MIS	Current curriculum redesigned		✓	
5.3.3 Train staff on digital safety/citizenship curriculum so that it can be embedded in current content when applicable.	Ex. Dir. of Tech, iCoaches, MIS	Staff trained on digital safety/citizenship curriculum		✓	
5.3.4 Resources for digital safety and citizenship are available for parents and community online through myfisd.com and advertised.	Ex. Dir. of Tech, iCoaches, MIS, Ex. Dir of Comm.	Resources are made available and advertised		✓	
5.4.1 Research trends in data and network security.	Dir. of Technical Services	Research is conducted	✓		
5.4.2 Review password policies and best practices for all systems and enforce secure password procedures for all staff and students.	Dir of Technical Services, Network Administrator	Password policies and best practices are in place and enforced.	✓		

SAFETY CONT.

5.4.3 Provide training on potential malicious activities that could pose a threat to the network when unknowingly accessed by staff or student.	Ex. Dir. of Technology	Training provided	✓		
5.4.4 Conduct annual penetration test of the network to evaluate internal, external and wireless networks.	Dir of Technical Services	Penetration test conducted and results reviewed	✓		
5.4.5 Create a process that will address access for user accounts that leave or change roles within the district.	PEIMS and Skyward Support Specialist	The process is in place	✓		
5.4.6 Ensure all networked security devices are properly isolated.	Dir of Technical Services	Security devices are properly isolated	✓		
5.4.7 Designate a Cybersecurity Coordinator	Ex. Dir. Of Technology, Superintendent	Cybersecurity coordinator designated	✓		
5.4.8 Develop a cybersecurity policy	Cybersecurity Coordinator	Cybersecurity policy is developed and in place and will detail how the district will secure the district's infrastructure against cyber attacks and other cybersecurity incidents	✓		

COMMUNICATION

Supports Strategic Plan Goal 1 - We will develop a district-wide system that establishes a culture of community service for all students.

Goal 6

We will provide, encourage and support digital communication with staff, students, parents and community that informs our stakeholders and enhances learning.

Objective 6.1 Maintain and promote common tools for district digital communication

- Research and review current options available
- Set communication standards to be followed
- Provide staff development on current communication tools

Objective 6.2 Keep staff informed on current trends and availability of services and equipment in the district and campus.

- Tech Equipment available to check out
- Staff's availability to assist
- Newsletter

COMMUNICATION

Strategy Description	Monitor	Expected Result	Year 1	Year 2	Year 3
6.1.1 Research current communication tools available	Ex. Dir of Technology	Research is completed			✓
6.1.2 Set standards to follow for communicating	Ex. Dir of Technology, Assistant Superintendent of Curriculum and Instruction	Standards are established			✓
6.1.3 Provide information to staff via PD or other means on the standard tools for digital communication and the standards to follow.	Ex Dir of Tech, Assistant Superintendent of Curriculum and Instruction	Staff are aware of and adhere to communication standards			✓
6.2.1 Develop a marketing program to bring awareness to services the technology department can provide	Ex. Dir. of Technology, iCoach at each campus	Marketing program developed and shared.		✓	

EVALUATION

The district Technology Services Staff and/or Technology Plan Committee (TPC) will meet once a semester or more as needed to implement and evaluate the technology plan and develop alternative courses of action when necessary. Updates regarding progress on the technology plan will be provided to district leadership and the school board as needed. Progress towards plan goals and objectives will be assessed according to progress toward completion of strategies. Each strategy describes a specific activity and has a defined purpose and timeline for implementation or completion. Each strategy also includes a person responsible as well as evidence that will be used to measure the successful completion of the strategy. Each person listed as being responsible for strategies will evaluate progress toward timely completion of their strategies and report to the TPC at semester meetings. Strategies will be recorded as completed or in progress. Completion progress will be measured against the evaluation criteria listed with each strategy. In addition, district-created surveys will be used on a regular basis to evaluate progress according to the technology plan. These surveys will provide data that will be useful in evaluating and documenting progress. The technology plan includes a ticket system that is used by staff members to request technical and instructional technology support. The quantity and type of requests as well as the timeliness of completion will be evaluated to determine if goals for the availability of support for technology are being met.

APPENDIX

Friendswood ISD Website:

<https://myfisd.com>

Friendswood ISD Technology Plan:

<https://myfisd.com/technology-department/>

Friendswood ISD Responsible Use Policies

Staff <https://is.gd/RI3Y7I>

Student <https://is.gd/6mC1fH>

GLOSSARY

LMS - Learning management systems (LMS) are software applications or Web-based technologies used to plan, implement, and assess a specific learning process.

PLC - Professional Learning Community

SSO - Single Sign-On