

PONCA PUBLIC SCHOOL DISTRICT TECHNOLOGY PLAN



April of 2024

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Introduction

The District Technology Plan has been developed to provide a common frame of reference for the use of technology in the district and help build a shared vision for moving the district forward. The technology plan builds on these other strategic documents, focusing on the wide range of technology related activities necessary to help fulfill the district's goals. It also serves as a key mechanism in developing technology resourcing and use strategies in the coming years. Some of its actions or specific details may change, but the key actions and objectives will not. That is not to say that this plan is rigid or static. It will be revisited at a minimum annually for a formal update and as often as necessary to stay current.

In addition, leveraging the strategic guidance of the district, the technology plan development relied on extensive feedback from focus groups of administrators, teachers, students, and other staff members and intensive research of other school districts. These individuals helped frame each of the objectives and offered feedback on possible goals/actions the district should undertake to satisfy the objectives.

Technology, in many forms and applications, has been shown to do everything from saving money through efficiencies to helping increase student engagement and achievement. Leveraged as part of a deliberate plan, it will provide the Ponca School District with a powerful tool to help transform how it educates its students.

STRATEGIC PLANNING PROCESS

The process used to develop this document is based off of educational needs to engage students in the learning process and prepare them for their future. The outline below was used to guide its development.

1. Determine what is important to the organization and where it is going
 - a. This step is requires understanding the school districts strategic plan and other guiding documentation to obtain its vision, values, and items of importance
2. Conduct current and future environmental assessment for both technology and education to determine assumptions and limitations that may impact the plan
 - a. Part of this step is gathering feedback from current staff, students and other school districts through surveys, focus groups, and other mechanisms
3. Develop the technology vision and specific objectives that support the district
 - a. This step helps bound the broad area of technology and develop objectives specific to the technology area the support the overall organizational direction
4. Based on where organization is today, determine needs and goals with specific actions highlighted over time for each objective
 - a. This is the heart of planning as it develops the specifics to move from where the organization presently is to its desired end state specific to technology. Because technology is framed and aligned to the district mission, this step helps ensure accomplishment of overall district plans
 - b. This step involves framing of resourcing implications both in terms of dollars and personnel for coming years

DISTRICT MISSION AND STRATEGIC PLANS

SCHOOL DISTRICT MISSION STATEMENT

Ponca Public School is committed to building a solid educational foundation for all Individuals by providing a quality learning environment and promoting standards of excellence.

How Do We Do This?

The district is committed to giving students the talent and skills they need to prepare them for lifelong success. The district has built several guiding documents that shape all efforts moving forward. There are five strategic plan priority areas as highlighted below. As highlighted by the district vision, the primary focus of a school is student achievement. To that end the district created a guiding document that further expands the student achievement priority area. The four additional focus areas are listed under student achievement.

STRATEGIC PLAN PRIORITY AREAS:

1. Student Achievement
 - a. High quality professional development including the use of collaboration to focus on the implementation of differentiated instruction.
 - b. A consistent focus on instructional methodology as a means of bringing about heightened student achievement. Instructional strategies will be strengthened through high quality professional development (PLC) to implement effective teaching practices in the classroom with integrity and fidelity.
 - c. The design and implementation of formative and summative assessments district wide to measure the success of our students as they are assessed on what they know, understand and are able to do related to the content and skills in each subject area.
 - d. Use of data to drive all decisions related to the engagement of student academic progress including, but not limited to, data, common formative and summative assessments, other classroom based assessments, use of technology in the classroom, data gathered through teacher, student, community and parent surveys.
2. Educational Facilities
3. Human Resources
4. Community Engagement
5. Fiscal Accountability

TECHNOLOGY PLANNING ASSUMPTIONS

While technology is and will continue to be dynamic and in many ways unpredictable, certain trends will continue forward and are important to consider as part of the overall planning process. The assumptions below helped guide consideration of objectives, goals and actions in the strategic planning process. These assumptions are also informed by current technology trends and industry feedback about possible future developments. They are important to use when completing needs assessment and goal development because of possible implications.

Technology Specific Assumptions

- User desires for the ubiquity of connectivity and mobility continue increasing
- Bandwidth needs will increase, as will the capacity to support
- Wireless speeds, coverage, density, and network reliability will keep improving
- A majority of services and servers will be able to be served via “the cloud”
- Users will continue to build more comfort and capacity with technology
- Users will demand more opportunities to service their own support needs
- Information and data analysis capabilities will continue improving
- Growth in device computing power will continue
- Impact of social media technologies will continue expanding into enterprise
- Users will become increasingly comfortable with digital print

Environmental Assumptions

- Instruction
- Online testing demands will increase at all levels
- All standardized tests have become computer-adaptive tests
- Most components of district assessments will be delivered online
- Curricular material will increasingly rely on digital content and less on print
- Computer assisted instructional interventions will be common at all grade levels
- As the consumerization of IT trends continues parents and students will expect more technology use throughout subject areas and grade levels

• OTHER ASSUMPTIONS

- Enrollment will fluctuate slightly over next 5 years
- Staff numbers will remain in line with student numbers in the coming years
- Budgets will see small increases that effectively cover inflationary factors with little “new” money available
- District demographics will remain similar, with a slight decrease in free/reduced percentage
- Education Reform efforts will continue to reshape teacher leadership and development while offering new possibilities for staffing support

TECHNOLOGY SURVEY / FOCUS GROUP HIGHLIGHTS

Technology Survey

In the fall of 2014, the district conducted an interview teacher by teacher question-answer method of accessing teacher needs. A significant number of staff were questioned in each building. The entire survey data set was used to aid the development of this document identify the top needs in each of the survey’s four focus areas are highlighted. End of each school year, teachers send requests for technology and technology needs to the district IT department. In the spring of 2023, the district conducted a Google survey to access teacher need for a new laptop. Teachers will also keep their Chromebook that were purchased in 2021.

Classroom Needs

1. In 2014, the district needed more student centered technology in high school, middle school, and elementary to help encourage collaboration, creativity, critical thinking, and other value-added uses. In the fall of 2015 K-12 students were given dedicated Chromebooks. In the fall of 2021, every student Pk-12th grade was given a new Chromebook for their use.

2. In the fall of 2014, all schools needed the improved ability to conduct online or tech supported assessments. Today all assessments are taken on student Chromebooks.
3. Projectors are replaced as needed.

Access Needs

1. In the fall of 2014, middle and elementary school teachers cited their need for more computing devices to ensure consistent availability for instruction. Fall of 2015, K-12, students were given a dedicated Chromebook. Fall of 2021, all students were given a new Chromebook.
2. In the fall of 2022, new wireless access points were installed across the district.
3. Fall of 2022, all wireless access points were replaced to improve eternal bandwidth and district wireless capacity in all areas.
4. In the Spring of 2023, a new server was installed, and the old server from 2011 was removed from the school network.

Skills Needed

1. Students need more foundational skills early in school that lead to advanced IT skills later. The fall 2021 survey; teachers cited that students need to have more keyboarding skills at the 3rd – 4th grade level.
2. Teachers need time and options to develop skills with more advanced technology applications. During PLC time, there is time geared toward sharing technology skills among teachers and tech sessions.

Environment Needs

1. Continue to expand and enhance technology related professional development and update projectors and smartboards.
2. New bell system / intercom system is needed

Staff and Student focus group highlights

The results of many separate comments were consolidated into the key needs listed below.

Students

1. Individual computing devices were given to all students in the fall of 2021 to replace original 1:1 devices.
2. Help teachers to develop skills and continue to expand technology use in meaningful ways

Staff

1. Technology skills need to be taught earlier and then in greater breadth through district
2. Teachers need to be empowered with flexible and reliable infrastructure, quick tech support and continued support for technology based instructional changes in the classroom.

PONCA DISTRICT TECHNOLOGY VISION – “ENGAGE LEARNERS”

Technology tools and infrastructure will help continuously improve strategic plan priority areas especially in the classroom by enhancing instructional methodology, supporting assessments, providing data analysis tools and helping prepare our students with 21st century workplace skills.

Technology is an integral part of achieving the district’s mission, just like great teachers, an outstanding support staff, high quality curriculum, and other components. This plan seeks to highlight how technology will assist the district in accomplishing its mission and satisfying its strategic plans, and guiding documentation in the coming years. At a high level, these plans focus on differentiated instruction, formative assessment, and data analysis used to help raise student achievement.

The use of technology will help facilitate plan accomplishment by giving administrators, teachers, and students the tools and knowledge they need to execute a 21st century differentiated curriculum. Teachers will be empowered in new ways with technology tools that help more easily adapt the curriculum to a wide variety of needs and student learning styles. They will have new resources and training that they may use to help manage differentiation or construct lessons in new ways. Formative assessment is a powerful mechanism that can also help raise student achievement. Assessment takes many forms and is often time consuming but technology resources can help improve these areas.

The district needs to be able to capture and analyze data to leverage formative assessment data, aid attendance and build relationships with students. The objectives and goals outlined in this plan all help drive towards implementation of differentiated instruction that is directed by more frequent standard formative assessments and strong data collection and analysis capabilities. This will be done in a manner that empowers teachers without providing extra burdens on already stretched time. Finally, technology helps students learn and become more comfortable with technologies they will see in the work force. This helps ensure we are providing our students with usable 21st century skills regardless of future plans after leaving the district.

TECHNOLOGY OBJECTIVES

As part of the strategic planning process, the district decomposed all technology functions into seven discreet areas. These areas align technology with strategic planning documents and capture in broad terms where technology helps support district operations. Due to the dynamic nature of devices and specific items some technical items may change but these objectives are fairly broad and enduring over time and independent of specific hardware or software solutions. These objectives serve as a guide for needs assessment that frame the wide variety of more specific annual goals. The district will work in all of these areas simultaneously to ensure it supports changing district goals in the coming years.

OBJECTIVE 1: District curriculum is designed and implemented in a manner that leverages available technology resources to help differentiate instruction, engage students, improve achievement,

Curriculum: Technology resources themselves merely enable or enhance the curriculum that is in place. Good technology may simply make a bad curriculum worse. However, good technology can make a good curriculum great. 21st Century curriculum is marked by richness of content as well as the ability to enable more individualized, group, and self-paced instruction. This area also focuses on the development of 21st century skills that include technological skills such as keyboarding and understanding of technology concepts to being able to work in groups and other areas still under development. 21st Century curriculum will be increasingly free of time and location through the use of online content.

OBJECTIVE 2: All district teachers are equipped with 21st century teaching resources that positively support the curriculum and enhance instruction.

Teacher Resources: This includes all necessary technology resources for a teacher to conduct their classes in an empowered 21st century environment. Technology tools in the classroom allow teachers to better differentiate instruction, engage students in more meaningful ways, add richness to instructional content, and have a host of other impacts when tightly integrated into the curriculum. This technology includes hardware and software with items such as interactive smartboards, collaboration applications, streaming video services, websites, and others. These resources vary by educational level and subject taught and can vary between teachers. That being said, there is a standard expectation that all classrooms will have a baseline of components to use.


OBJECTIVE 3: All district students are trained and equipped with 21st century resources that enhance their ability to learn and participate in district curriculum.

Student Resources:
Students today are learning in a

dynamic and rapidly changing world. The use and penetration of technology in all facets of an increasing globalized society change how individuals interact with their surroundings and learn. Additionally, the basic tools students may need to succeed include different technology components. As the resources our teachers use to teach an enhanced curriculum adapt to the 21st century so must the tools that we equip our students with to learn. These resources include ensuring our students have the appropriate hardware or software when needed such as individual computing devices.

OBJECTIVE 4: The district employs information systems that enable authorized users to quickly and easily perform student data collection and analysis, financial and human resources transactions, and other district functions in near real time from virtually any device.


Information Systems: High performance organizations have found ways to leverage technology systems to gain efficiencies, empower employees, and optimize the organization's processes. This area includes information systems that automate execution of business processes such as finance, collection of data, to scheduling. In a school district the most powerful use of information systems is the collection and analysis of student data through online gradebooks, assessment capabilities, and analysis systems to help drive appropriate actions and instruction. Appropriate use of these systems can minimize employee time spent doing non value added work and allow them to focus more time to performing the mission of the district.



OBJECTIVE 5: The district has a highly available, flexible, and capable technology infrastructure that supports all demands in the classroom as well as district operations.


Information Technology

Infrastructure: Having an up to date infrastructure is vital in that it underpins and enables all of the other areas to contribute to the accomplishment of the district's goals and mission. It includes building the network infrastructure both wired and wireless to allow for robust connectivity to networked resources. It also includes providing the services and servers that employees and students rely on from file sharing to email. This area also entails services such as security, content filtering, and many others.



OBJECTIVE 6: The district leverages technology to quickly and comprehensively communicate a variety of information types to all interested stakeholders.

Communications: Modern organizations increasingly rely on technology enabled communications including dynamic web sites, social media, mobile apps, and other technologies that help personalize information while maintaining appropriate connections. Users expect the organization to be able to rapidly communicate different levels of information to a variety of devices.



OBJECTIVE 7: All staff will have a variety of methods to learn technology related tools/concepts including, online self-directed, district provide group instruction, individual targeted training.

Professional Development: Technology tools can offer tremendous value in many different areas of district operations but in order to realize the value individuals must be sufficiently trained and supported. There is no one size fits all strategy for professional development as there are many different learner types, many different subjects, and multiple levels of need.

CURRENT TECHNOLOGY DEPARTMENT OVERVIEW

The Ponca Public School Technology Department supports all district technology endeavors from basic support to curriculum resources. The school technologist supports students, administration, support staff, teachers, subs, and parents. The school technologist reports directly to the superintendent. Additional tech staff was added in the spring of 2016 to support the director in the management of day-to-day department and technology support tasks. In order to carry out the assigned tasks and help the district achieve its goals, the department looks at the following:

Building Technician / Help Desk: Respond to user technology hardware and software problems on site and remotely. Administration, support staff, students, teachers, and business manager.

Information System: Operate and maintain the student information system including gradebook applications and provide training and support for district wide use of these systems. Produce data for required state reporting and other necessary reports throughout the year and serve as data stewards.

Information System for Parents: Operate and maintain the student management system parent portal and assist parents with login information.

E-Funds Management: Manage and assist parents with making online payments. Work with business manager and lunch personnel to trouble shoot needs between PowerSchool, E-funds and state reporting.

Network Administrator: Operate and maintain all district wired network switches, servers and wireless access points, cameras, firewalls, filtering system and electronic doors.

Teacher electronic resources and Library system: Oversees district instructional technology efforts and traditional media/library software. Students and teachers have to be rostered and loaded for numerous software programs that support district curriculum.

Technology Coaches: Assists teachers, administrators, and others and integrating technology component into curriculum in a manner that is value added and helps improve achievement and engagement.

Online Testing: Hardware and Software preparation for testing. Manage administration, teacher and student accounts. Student data and teacher data loaded before each testing window.

E-Rate Grant Writing: Used to pay for a portion of Internet Access and hardware.

School Messenger System: Maintain and operate system with rostering and parent information.

Web Page: Management and postings.

Social Media: Management and postings.

Security Doors and Cameras: Operate and maintain systems

Fiscal Year 2021-2025 Goals

Technology related needs or goals were developed based on district goals, assumptions about the future, the current environment, and extensive feedback. This section highlights the goals that will help drive accomplishment of the seven objectives in coming fiscal years. They help ensure the district is moving towards satisfying its objectives. Each goal contains key actions that must be accomplished to ensure goal fulfillment. Timelines are offered for general planning purposes as they are understood right now, however they may change over time as we refine our approaches in the coming years. Finally, valuation criteria guide the review of whether goals are being accomplished or not.

Curriculum

OBJECTIVE 1: District curriculum is designed and implemented in a manner that leverages available technology resources to help differentiate instruction, engage students, improve achievement, and teach technology skills

Goal 1: Technology skills are taught at age appropriate level with high level of proficiency at grade level

Description: The district must ensure that required technology skills are identified and appropriately aligned with state and national standards. This will then allow for instruction at the right age to ensure students are obtaining necessary technology proficiency at the right times.

Key Actions	Timeline
Develop strategy for inclusion of technology literacy skills including keyboarding in elementary grades existing curriculum. We need to look at adding 3-4 th grade keyboarding back into the curriculum.	2025
District will conduct program review of K-12 technology instruction to develop tightly integrated sequence of instruction in technology for all students	Ongoing
Begin district wide implementation of technology literacy skills in elementary	Ongoing
Update curriculum for middle school capstone technology course(s) that aligns with local, state, and national standards and prepares them for high school	Ongoing
Teachers at the elementary level will use Google Classroom	Ongoing
Teachers at the high school level will use Canvas	Ongoing

Evaluation Criteria
All students leave 7 th grade with keyboarding skills and technology exposure in other areas
100% of 8 th grade students take updated keyboarding class that will enable them to function in high school

Goal 2: All curricula incorporate 21st century student and teacher resources in a manner that enables differentiation and engages students

Description: As the district invests in giving all teachers the 21st century teaching resources they need simply relying only on teacher ingenuity will not allow for maximum return on this investment across the district.

These resources must be formally included into curriculum maps and other areas ensuring teachers clearly understand when they may be able to make use of technology in their lessons.

Key Actions	Timeline
Develop standard list of computer assisted intervention/enrichment software by grade	Ongoing
Limit physical book and media purchases; to the greatest extent possible the district will not purchase additional physical media and will leverage digital resources	Ongoing
Develop digital lending library concept in high schools to allow for check out of digital materials	Ongoing
District will expand foreign language support and opportunity using online capabilities and district technology tools	Ongoing

Measures of Effectiveness
100% of teachers and administrators know what technology aided interventions are available by grade and subject area
Book purchase costs decline and high school students and staff know how to use lending library and e books

Goal 3: Continue to keep the 1:1 devices up to date to provide teachers a value added curriculum tool in instruction

Description: The 1:1 program enables new and enhance instructional practices through online course content, flipped instruction, and project based learning approaches. The program will help contribute to lower discipline incidents, higher attendance, and better 21st century skills for our students. Due to the magnitude of change we must continue focusing on exploring and developing these new curricular approaches. Teachers must also have time to develop and explore the new approaches during and outside of regular school hours.

Key Actions	Timeline
Continue development of new flipped learning approaches	Ongoing
Explore the expansion of technology based projects coupled with 1:1 in high school	Ongoing
Provide high school teachers opportunity to expand hybrid instruction development (also included in professional development)	Ongoing
Provide staff professional development and other support time to all teachers to incorporate technology in the classroom	Ongoing
Measures of Effectiveness	
Need to provide continual surveys to measure the effectiveness of the 1:1 devices	

Teacher Resources

OBJECTIVE 2: All district teachers are equipped with 21st century teaching resources that positively support the curriculum and enhance instruction.

Goal 1:

Classrooms will become equipped with grade appropriate 21st Century teaching resources

Description: In years to come the district will expand available technology. In the coming years it will be important for the district to consider current players, tools, and their application.

Key Actions	Timeline
Continue to source and allow access to appropriate content that teachers require to integrate into instruction	Ongoing
Work with special education teachers to develop and field comprehensive district plan for appropriate assistive technologies if needed. Plan will help shape special education specific investment	Ongoing
Refine requirements for existing classroom packages based on market developments	Ongoing
Develop refresh plan for existing classroom equipment according to updated plans	Ongoing

Measures of Effectiveness
All classrooms have appropriately technology software packages fielded and updated when necessary

Goal 2: Staff will continue to need tech support to install, modify, and support appropriate software on their local staff computers when necessary.

Description: Restricting administrative rights to computer systems help provide consistency, stability, and security for the district users. This was relaxed for a couple years and the district was hit with viruses and some major computer issues.

Key Actions	Timeline
Two technologist are on staff to provide software installation and support.	Ongoing
Two technologist are on staff to collaborate on educational software and hardware needs.	Ongoing

Measures of Effectiveness
Teachers are able to utilize technology in the classroom as need to meet educational goals.

Projector - All Classroom projectors are mounted to the ceiling. This allows teachers to share PowerPoint presentations, internet sites, online, local, or student produced videos, pictures, and a wide array of other curriculum resources.

Chromecast- All Classroom projectors have a google Chromecast connected to them. The Chromecast allows teachers and students the ability to wirelessly project to the smartboard.

Interactive Smartboard – Interactive smartboards advance the traditional whiteboard by allowing interactivity with computer and internet based programs. Students can write on the boards while interacting with websites, content modules, or instructor designed curriculum materials. Teachers utilize smart exchange and a wide variety of resources.

Chromebooks – Students PK-12th grade are each provided a Acer Touch Chromebook. 8th– 12th Grade Students are allowed to take their Chromebook home.

Curriculum materials - Both core and non-core curriculum areas are provided with rich content resource packages dedicated to their area.

Special education - classrooms at the high school level also have 2 “kindle fires” specifically tailored to student and teacher needs.

Printing and Scanning - All teachers at each school can print to a main copier in the office that has the capability to duplex, collate and staple (each school has a black/white and a colored copier). Copiers also have the ability to scan to teacher and staff network shared folder and/or email.

Computer Labs – We no longer have a computer lab! Students use Chormebooks in the business classroom. Students and staff have access to google applications, Microsoft Office 365, and various applications.

Canvas – An online student learning management system that allows teachers to build courses and offer necessary materials through the Internet. The system is similar to many seen in college course offerings today and provides

location independent access 24x7 to any course content the teacher makes available. Canvas LMS is used for the 7th - 12th grade.

Google Classroom – Elementary teachers will use Google Classroom as their student management system to provide students access to their online curriculum materials.

Student Resources

Goal 1: All students will have necessary technology tools to ensure adequate engagement, use, and participation in a differentiated 21st century curriculum.

Description: As our instructional capabilities expand and teachers are able to leverage classroom and general technology to better differentiate and manage their classrooms it will become important to ensure that students have the tools they need to engage in this new environment. To continue the 1:1 initiative the students will see an impact from technology rich instruction.



OBJECTIVE 3: All district students will be trained and equipped with 21st century resources that enhance their ability to learn and participate in district curriculum.

Key Actions	Timeline
All students will be provided basic instruction on their device at the beginning of the school year and how to take care of the devices.	Ongoing
To continue the 1:1 initiative by keeping devices up to date.	Ongoing
The 8 th -12 th student devices will be allowed to be taken home	Ongoing
The Pk-7 th student devices will stay onsite.	Ongoing
Measures of Effectiveness	
All students have their own device in school in every class PK-12 th grade and can use for assessments, curriculum, information gathering, and building 21 st century skills	

Goal 2: All students have opportunity to access network resources outside of normal school hours.

Description: Network access has become the price of entrance into the globalized world driving new forms of collaboration and providing rich information resources. Students who do not have the opportunity to seek access at home will fall further behind those who do. The district will not likely be in a position to directly provide access but can work with local providers on innovative ways to bring affordable access to anyone who wants it.

Key Actions	Timeline
District work with local internet providers to develop possible options for low cost basic high speed internet access	Ongoing

Measures of Effectiveness
All student who desire to do so can obtain affordable internet connectivity

Information Systems



OBJECTIVE 4: The district employs information systems that enable authorized users to quickly and easily perform student data collection and analysis, financial and human resources transactions, and other district functions in near real time from virtually any device.

Goal 1: Student information system that integrates with district assessment programs, analysis capabilities, and third party tools

Description: Continue to use our student information system PowerSchool.

Key Actions	Timeline
Student information and gradebook with PowerSchool. Student system is used for all levels, gradebook is divided between PK-2 nd , 3 rd -6 th and 7-12 th Grade.	Ongoing
Conduct professional development for all staff	Ongoing
Evaluate Canvas 7 th -12 th grade to support 1:1 initiative	Ongoing
Evaluate Google Classroom for K-6 th grade 1:1 initiative	Ongoing
If available and valuable, add additional features that support other goals and objectives such as data analysis, parent calling, fee payment, etc.	Ongoing
Students continue to use online registration in student information system	Ongoing

Measures of Effectiveness
Student system feedback is positive and meets all user expectations.
Teachers can easily see entire history of rich information on each student in their classes

Goal 2: Every person who needs data (performance, other) has instant access to it and the ability to perform meaningful analytics with minimal time required to do so

Description: Utilize data from state reporting, AR, NWEA, AimsWeb and PowerSchool

Key Actions	Timeline
Access data from a variety of sources to enhance student learning and progress	Ongoing
Conduct professional development	Ongoing

Measures of Effectiveness
All district users (teachers, administrators, staff) can execute data queries to obtain information on their class or building depending of authority level

Goal 3: All district documents are digitized and available online to allow for flexible searching, processing, and enhanced workflow

Description: To date most district document retention is still paper based. This makes use of documents or information acquisition time consuming and cumbersome. Modern document

Key Actions	Timeline
Explore options for online document scanning	Ongoing
Field new system and start conducting professional development	Ongoing

Measures of Effectiveness
Paper document creation and storage is decreased to minimum acceptable level
District users can immediately access a digital copy of online records for which they have permissions

Technology Infrastructure

OBJECTIVE 5: The district has a highly available, flexible, and capable technology infrastructure that supports all demands in the classroom as well as district operations.

All of the preceding efforts rely on having robust technology infrastructure components. It is imperative that we build a 21st century foundation for 21st century classrooms and 21st century teachers and students

Goal 1: Network backbone capacity meets full spectrum of educational demands and is able to scale easily for all future applications.

Description: Current computer applications and all new software packages to support the 1:1 classroom from the gradebook system to the curriculum resources that are demanding ever greater bandwidth in the district. Without a high capacity network backbone all other initiatives will be difficult to accomplish.

Key Actions	Timeline
Review network usage and upgrade internet accordingly	Ongoing
Begin assessment and where necessary an upgrade of existing cable plant	Ongoing

Evaluation Criteria

No district location has more than 75% sustained use of existing bandwidth capacity

Goal 2: District employees and personnel supporting district operations able to easily access network resources from anywhere on district property

Description: The district must ensure that its employees can have mobile access wherever they are in the district. This must be done with minimal effort on the user's part.

Actions	Timeline
Update policies, procedures, and technical implementation to allow full range of using technology in the classroom.	Ongoing
Measures of Effectiveness	
Any district user or guest can connect anywhere in the district wirelessly at productive speeds as a guest	

Goal 3: District data center functions are highly virtualized and nearly all cloud based

Description: Virtualization and internet hosted or “cloud” based software continues to improve and decrease the needs to purchase and maintain costly physical and VM servers. These technologies allow more flexible user access and allow for much greater enterprise flexibility.

Actions	Timeline
All student file services are provided online	Ongoing
All K-12 students have district provided login that is used for SSO to as many resources as possible	Ongoing
A majority of user file shares are provided online	Ongoing
District will virtualize and where possible move services into internet hosted solutions	Ongoing

Evaluation Criteria
District support of data center migrates from hardware maintenance to value added software services
All employees and students can access all district services from anywhere

Goal 4: Increase technology efficiencies in all areas of operation

Description: One of the great uses of technology is to help increase efficiencies in daily operations. The district will face difficult budgets over the coming years and finding efficiencies through technology is an easy and relatively painless way to help control costs.

Actions	Timeline
Continue finding alternatives for print that help decrease need to print	Ongoing
Improve updates and software distribution to increase effectiveness and decrease lost time because of update related issues	Ongoing
Inventory control system software is expanded to all schools	Ongoing
District events are able to be streamed online if personnel to staff the events	Ongoing

Evaluation Criteria
Total pages printed continue to decline without impacting instruction
District can produce detailed and accurate inventory reports
Any district event can be watched online

Goal 5: District technology infrastructure able to withstand catastrophes (power loss, HVAC failure, data loss, network loss) retaining all necessary data and is able to easily recover from small scale to catastrophic losses

Description: No organization is immune from the risk of service interruption through catastrophic events. Proper infrastructure and risk management best practices will help the district mitigate this risk as much as possible.

Actions	Timeline
Backup data offline	Ongoing

Measures of Effectiveness
District downtime due to power outages or other interruption is near zero
Critical functions are able to operate with loss of primary systems and data and network connection

Goal 6 Appropriately staff Personnel to support administrator, teacher, and student technology needs

Description: To support the wide range of goals and initiatives relating to technology within the district, proper technology manpower levels are critical.

Actions	Timeline
Maintain current technology manpower position to keep technology throughout the district running on a day to day basis.	Ongoing

Evaluation Criteria
All user trouble tickets are able to be addressed in less than 48 hours possible
Teacher surveys indicate technology coaches provide valuable support and professional development

Goal 7: All district staff computers are proactively refreshed to keep units highly functional and minimize service time/costs

Description: Current and reliable computing devices are a must for staff members. The district will continue to employ a deliberate replacement strategy to replace older teacher devices. If possible the district will reutilize older devices to the extent they do not place extreme support burdens or are not capable of effectively running current software. When eliminated completely the district will either recycle or possibly sell devices.

Actions	Timeline
When in use and not replaced by 1:1 district will fresh devices.	6 (2023)
Evaluation Criteria	
Employees computers can effectively run all required software	
Break fix time and costs do not increase	

Goal 8: District has modern, integrated, standardized, security cameras, and door access control system.

Description: The district currently has security camera devices in the high school building and the Ponca elementary building. The Ponca buildings have very rich coverage while the Jackson School have none other than an entry camera. The camera enterprise must be expanded and refreshed to ensure safety and security needs are met in all buildings across the district. Security camera systems are also becoming increasingly networked and technology rich so cameras considered must integrate with the current security camera system.

Actions	Timeline
Conduct operational trials to determine requirements for new system	Ongoing
Begin first phase of new security system implementation	Ongoing
Begin additional phases of new security system implementation	Ongoing
Evaluation Criteria	
All buildings have full range security camera system installed that meets all district requirements	

Goal 9: All buildings have sufficient capacity and flexible locations for powering range of technology devices

Description: The continued growth of technology devices and the increasing use throughout the instructional day places increasing demands on the electrical power infrastructure. Newer district buildings are built with these demands in mind but older buildings are not. Deliberate efforts are necessary to safely provide this important utility.

Actions	Timeline
Review district power and modify where necessary to support 1:1 computing efforts	Ongoing
Review district cooling systems in server rooms to ensure rooms are kept cool to protect equipment	Ongoing
Evaluation Criteria	
Buildings are able to sufficiently charge and/or power devices in a manner that does not interrupt instruction.	
Buildings are able to sufficiently keep server rooms at 63 degrees at all times.	

Communications

OBJECTIVE 6: *The district leverages technology to quickly and comprehensively communicate a variety of information types to all interested stakeholders.*

Goal 1: District employs modern web, social media, and video tools to interact with staff, students, parents, and community members with appropriate support staff in place

Description: Technology tools are an important piece of the district's strategy to communicate with all of its interested groups. As areas such as social media expand in staff, parent, and students' lives the district must continue to develop its efforts to use these tools.

Key Actions	Timeline
District will review and implement enterprise social network tools to expand intranet capabilities for staff members	Ongoing
Leverage all communications channels to continue to help users understand district efforts related to technology supporting instruction and all other areas.	Ongoing

Evaluation Criteria
District have secure access to district resources anytime from anywhere
External users and groups are able to quickly and easily locate district related information using current technology tools

Goal 2: District will help parents and students monitor class progress/grades (online in real time)

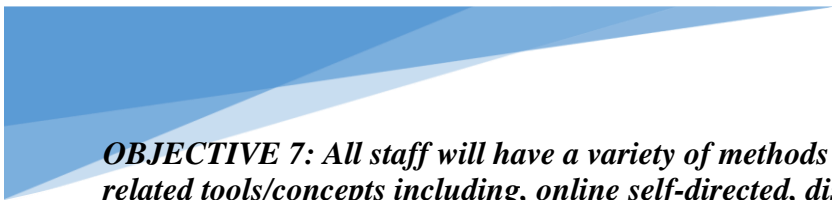
Description: Parents and students have increasing abilities to check grades and class progress online through website, mobile apps, and other online methods all in real time. Physical report cards that are produced at a single point in time (end of each quarter) take a large amount of time to produce and distribute while now being out of date. The district will begin to walk out of this process to one of real time/just in time monitoring of grades. Parents have access to Real-time lesson plans online.

Key Actions	Timeline
Continue to educate parents on ways to access student progress monitoring (website, mobile app, etc.) increase	Ongoing
Print report cards only by exception	Ongoing

Explore opportunities for teachers to host virtual conferences with parents vs. onsite	Ongoing
All teachers utilize real time lesson plan books	Ongoing

Evaluation Criteria
All parents and students can check class progress anytime from anywhere
Teachers and building staff spend far less time printing, sorting, mailing, or otherwise handling paper report cards

Professional Development



OBJECTIVE 7: All staff will have a variety of methods to learn technology related tools/concepts including, online self-directed, district provide group instruction, individual targeted training.

Goal 1: District employs innovative approaches to ensure all users are fully capable of using district technology in meaningful ways

Description: Technology can provide valuable tools to aid instruction but also provides disruptive change that requires high levels of continuous professional development and support to ensure optimal implementation and use.

Key Actions	Timeline
Develop online training repository that allows staff to quickly and easily access information for all district technology systems and tools	Ongoing
Create sub teacher training to help subs learn district technology tools	Ongoing
Create district technology coaches program to provide just in time training, co-teaching, and other value added support to teachers	Ongoing

Evaluation Criteria
Teachers are able to build engaging courses that leverage the 1:1 Chromebook integration
Staff believe that district provided technology professional development provides valuable content
All staff are fully capable of using classroom technology in ways that positively impact instruction

RESOURCING

Resourcing all the above goals to drive us towards fulfilling the technology objectives is no small undertaking. Funding streams that have been used in the past are changing. The district was able to use E-Rate for wiring, access points etc. The district will still make extensive use of the federal E-Rate program for internet, and wired/wireless network services.

Specific budget amounts are developed as part of overall district budget will be updated as part of the review and budgeting cycle in each of the coming years.

The district is in need of a bell / intercom system and updating projectors in classrooms.

EVALUATION

Each goal above lists evaluation criteria that form the foundation for monitoring progress towards each of the goals. The technology report will review each of these annually at a minimum to determine if sufficient progress is being made or if mid-course corrections are necessary. Additionally, dramatic changes to funding or any assumptions could drive updates or changes to the plan on a different timeframe.

SUMMARY

This plan provides a vision for the development of all facets of technology in the district over the next three fiscal years. This is merely a starting point for departure. This plan will be modified accordingly as we continue to mature our understanding and implementation of technology in conjunction with instructional practice and other developments in the district. The list below highlights some key goals in each of the seven focus areas. These goals, when completed, will help us drive towards increased student achievement.

- a curriculum that leverages technology in value added ways and teaches technology skills
- all teachers equipped with the appropriate 21st century teaching tools to aid their instruction
- all students outfitted with tools they need to learn in a 21st century instructional environment.
- Access to data that is user-friendly will facilitate data driven decision making
- a technology infrastructure that is highly mobile and cloud based allowing greater flexibility
- a variety of technology professional development avenues for teachers and other staff
- a strong technology based communication system that uses multiple avenues to engage all
- the 1:1 initiative will engage all students in the learning process.