

Fessenden-Bowdon Public School Technology Planning Process

Membership in the Fessenden-Bowdon Public School District Technology Committee is determined by administration and includes: administrators, faculty, building facilitators, technology department, special education staff, school board representatives, parent volunteers, and student representatives. All members are invited to participate equally. This team meets annually. The following information was presented and reviewed by the District Technology Committee. The committee will be looking at the new North Dakota Computer Science and Cybersecurity Standards guidelines for the following areas of technology for future updates: 1. Technology Systems, 2. Computational Thinking, 3. Information Literacy, 4. Computing in Society, 5. Digital Citizenship.

2019-2020 Planning Team Members

Name	Title	Role
Nancy Bollingberg	Superintendent/Technology Coordinator	Administration
MacKenzie Dietz	Library Media Specialist/ Technology Coordinator	Library and Technology
Mindy Rau	Technology Integrationist	Technology
Warren Strand	Principal	K12 Administration
Kelly Jones	Parent/Community Member	School Board Rep
Brittany Long	Parent/Community Member	School Board Rep
Mark Reeves	Music Teacher	K-12 Faculty Rep
Lyndsey Maddock	Extension Agent	Business Rep
Dylan Rudel	Farmers Insurance	Parent Rep/Business Rep
Signe Edison	Teacher/Educational Leadership Student	Contributor
Lucas Copenhaver	Seventh Grade	Student Rep.
Hannah Lange	Freshman	Student Rep
Matthew Sjoquist	Junior	Student Rep

The Technology Plan was approved by the Fessenden-Bowdon School Board on February 10th, 2020. The plan will be presented to all staff through the building administrators and the building facilitators. A PDF version of the plan is available on the school website and in the school office for public access. Any additions or up-dates to the plan will be added to the posted locations.

Technology Vision Statement

The vision of technology integration at Fessenden-Bowdon Public Schools is to empower students and educators by cultivating a technology-rich educational environment. Everyone has equal access to knowledge and lifelong ethical and social learning skills in order to be productive in an information-driven, global society.

Goals, Strategies, and Timelines

Goal #1: Fessenden-Bowdon Public Schools create learning environments that include effective technology resources for educators and students.			
Rationale: Access to technology resources is necessary to ensure that all students have the resources needed to be College and Career Ready. The types of technology tools available and the performance capabilities of those tools should be at a level that supports and sustains current learning practices and encourages new and innovative learning practices.			
Strategy	Measure	Timeline	Status
<p>1.1 The district provides the necessary infrastructure for Internet access for all students and staff. This includes file servers, Ethernet switches, routers, hubs, racks, wireless access points, patch panels and other hardware components to ensure Internet access. In addition, each school has data circuits (fiber optics and T1 lines) available to receive and transmit text, graphics, and audio to and from the Internet. E-mail services, virus protection, and Internet filtering (to meet the Child Internet Protection Act) are provided through EduTech, which is funded by the North Dakota Information Technology Department.</p> <p>Filtering decisions are made by the Technology Director in accordance with the state ITD Department.</p>	<p>Servers and hardware are updated to keep pace with demand as funding allows.</p> <p>Teaching Internet Safety K-12</p> <p>The technology department works with the state ITD Department to maintain a safe Internet environment for all patrons of the district.</p>	<p>Filtering is monitored and ongoing</p>	<p>Current August 2019</p>

<p>1.2 The district continues the development of an App for the district. The App includes calendars and events, policies and procedures, links to teachers webpages, and other topics as needs arise. The district supports personnel to maintain the website.</p>	<p>App and Website-the content management system is contracted through Apptegy. All aspects of the website are designed to meet WCAG ADA compliance guidelines. District stakeholders and the community provide feedback on the website. App.</p> <p>Need to work w/teachers to reach compliance on their websites.</p>	<p>The new app/website was launched in April of 2018.</p> <p>There is a continuous process of reviewing and developing compliant documents that meet WCAG ADA guidelines.</p>	<p>Current April 2019</p>
<p>1.3 The district makes computer science and other technology-related classes available to students through North Dakota Distance For Education at no cost to the student. Also Dual Credit courses online through the North Dakota University system at the cost to the student.</p>	<p>Students can enroll in courses with approval from administration.</p> <p>Need to make Computer Science available K-6. (i.e. Coding during library time)</p>	<p>Courses are available throughout the school year and summer if approved.</p>	<p>Ongoing August 2019</p>
<p>1.4 The district maintains a 1:1 student-computer ratio. Computers are replaced on a 5-year replacement cycle. The replaced machines may be distributed to classrooms to be used as a backup computer if students forget them, for State Testing, or other reasons as identified by the teaching staff. Teacher machines are standardized in quality.</p>	<p>Maintain 1:1</p>	<p>The district continues a 5-year rotation cycle for replacing computers and technology equipment.</p>	<p>Current August 2019</p>
<p>1.5 Maker Space is available for K-12 Makerspace Student Goals: 1. Use a wide range of idea creation techniques-such as brainstorming.</p>	<p>Maker Spaces provide students with the ability to explore STEAM (Science, Technology, Engineering, Arts, and Math) Technologies. They offer students a look into future career based experiences and allow</p>	<p>Maker Spaces will continue to be implemented in the district.</p>	<p>Ongoing 2020</p>

<p>2. Create new and worthwhile ideas-both incremental and radical concepts.</p> <p>3. Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts.</p> <p>4. Develop, implement, and communicate new ideas to others effectively.</p> <p>5. Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work.</p> <p>6. Demonstrate originality and inventiveness in work and understand the real-world limits to adopting new ideas.</p> <p>7. View failure as an opportunity to learn; understand that creativity and innovation are a long-term, cyclical process of small successes and frequent mistakes.</p> <p>8. Implement innovations</p> <p>9. Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur.</p>	<p>for the exploration of new ideas and how to carry them through to a final product.</p> <p>Makerspace resources are primarily in the library available for teacher checkout. Students are introduced to these resources during library classes.</p>		
<p>1.6 The district provides technical support so technology resources are reliable and available to educators and students. Adequate training is available for all educators and school personnel. Building facilitators serve as the first step in technical support issues.</p>	<p>The technology department currently has 2 employees 50% time each assigned to all technology needs including hardware and integration. They provide individual and group technical support for technology resources.</p> <p>Techie Tuesday for educators provides an introduction to technology tools & resources.</p>	<p>The district provides technology support on a ratio of 250 workstations to one support person.</p>	

Goal #2: Fessenden-Bowdon Public School supports educators in their use of appropriate technologies to improve their teaching and other professional practices.

Rationale: Teachers and administrators must possess skills that allow them to be innovators in technology-rich teaching, learning, and administrative environments. Through professional development, educators are proficient at aligning technology use with student learning standards and goals and integrating technology seamlessly into the curriculum.

Strategy	Measure	Timeline	Status
<p>2.1 The district endorses the National Educational Technology Standards for Teachers and School Administrators (NETS) and the ND Library and Technology Standards and uses them in developing standards for teachers, students, and administrators. Technology standards are used as a guide for providing professional development opportunities in the district. The North Dakota Computer Science and Cybersecurity Standards will be used as guidelines for the following areas of technology:</p> <p>1. Technology Systems 2. Computational Thinking 3. Information Literacy 4. Computing in Society 5. Digital Citizenship</p>	<p>District Technology Standards for Teachers and Students have been adopted and distributed through staff meetings and in individual classrooms.</p> <p>These Standards cover Kindergarten through Twelfth Grade. They were released in early 2019.</p>	<p>District Technology Standards are reviewed annually and used to prepare professional development.</p> <p>FBPS will be looking at how the Standards can best be implemented into the District Technology Plan and present that during 2019- 2020.</p>	<p>Current September 2019 and ongoing for Standards Implementation .</p>
<p>2.2 The district shares the definition for curriculum integration developed by the ND Department of Public Instruction (DPI), which encompasses curriculum design, teaching and learning strategies, new roles for educators and students, and assessments.</p>	<p>Through the Marshall Model of Instruction teachers and administrators are keenly aware of educational practices and technology use in the classroom. This is documented as part of</p>	<p>Documentation occurs through the observation process.</p> <p>Technology is included in curriculum planning.</p> <p>Integrated lessons are visible in lesson plans</p>	<p>Current August 2019</p>

	<p>the evaluation process.</p> <p>Integrated lessons are noted in lesson plans.</p>		
2.3 Techie Tuesday-Professional Development			

Goal #3: Fessenden-Bowdon Public Schools provides students with learning opportunities that are enhanced by technology.

Rationale: Technology in schools enhances and transforms teaching practices and student learning. It provides opportunities for educators to break through isolation and serves as a catalyst for significant changes in learning practices.

Strategy	Measure	Timeline	Status
<p>3.1 Educators use the ND Library and Technology Content Standards as the guideline for determining student technology literacy in general.</p> <p>Early 2019 the North Dakota Computer Science and Cybersecurity Standards were adopted for Kindergarten through Twelfth Grade. These standards will be implemented into the Fessenden-Bowdon Technology Plan beginning in 2019-2020.</p> <p>A spreadsheet combining the ND Library & Technology Content Standards and the ND Computer Science & Cybersecurity Standards is in the development phase which includes links to resources. https://docs.google.com/spreadsheets/d/1K_ZYZJx7ntV_CqhTUkW_j4ZFO3VfbD_mMoj_569ga_30/edit?usp=sharing</p>	<p>Eighth grade students attain a minimum competency in technology.</p> <p>Standards are benchmarked K-12.</p>	<p>Assessment of technology and engineering skills to real-life situations by Spring 2020.</p> <p>Common Sense curriculum and Google Be Internet Awesome are aligned with ND Standards.</p>	<p>Develop assessment during 2019-20 school year.</p> <p>Develop K-12 implementation plan during 2019-20 school year.</p>
<p>3.2 Educators implement standards-based learning opportunities that use technology-enhanced instructional strategies to meet the learning styles/needs of students, including students with disabilities.</p> <p>SeeSaw will be used as a digital portfolio for K-12. Technology integrated lessons created by students K-12 will be shared with students and their parents in a timely manner through SeeSaw. In grade three students are</p>	<p>Assistive technologies are available to help all students learn.</p> <p>Student created technology samples will be shared through</p>	<p>Assistive technologies are used as needed. We subscribe to Learn 360 and Learning A-Z.</p> <p>Students save a minimum of one tech example for K-1, two for grades 2-4, and</p>	<p>Current August 2019</p> <p>Implement Fall 2019</p>

<p>introduced to their Google Education account and will begin saving to the Drive in grades 3-12.</p> <p>Technology use is based on state technology standards for each grade level.</p>	<p>SeeSaw in grades K-12. Beginning in grade three students will save their information in their student Google account. In grade nine through graduation students will be introduced to their Office 365 account using their OneDrive for files as needed.</p> <p>Standards are used to determine appropriate skills and learning needs at each grade level.</p>	<p>three projects in grades 5-12 annually.</p>	
<p>3.3 Educators ensure that student/teacher use of technology is authentic, curriculum-based, collaborative, and/or communicative. Teachers will include four of their lessons that integrate technology (two lessons for K-1), of which at least one lesson requires students to use technology that involves communication outside of the district.</p>	<p>Lessons using technology will be included in teacher lesson plans. Educator's use of technology in their classroom will be evident through Cognia Eleot's, and the Marshall Model of Evaluation.</p>	<p>Documentation is evident in the reviews performed the principal.</p>	<p>Current August 2019</p>

<p>3.4 The district will use distance learning through NDCDE and other technologies to ensure that students graduate College and Career Ready.</p>	<p>Online courses are available to all students through NDCDE as well as Dual Credit courses through local colleges and universities.</p>	<p>Students taking online courses have access to a Microsoft Surface, Chromebook device, or whatever platform is required to ensure successful completion of each course.</p>	<p>Current August 2019</p>
<p>3.5 Students use age-appropriate software and technology programs (Go Math, IXL Math, IXL Reading, IXL Science, IXL Social Studies, Fusion Science, Reading Street, Reading Plus, Google for Education, Microsoft Office 365, Typing Pal, etc.) to enhance traditional learning. Keyboarding is taught in kindergarten through sixth grade.</p>		<p>Age-appropriate software is available for all students.</p>	<p>Current August 2019</p>
<p>3.6 Video streaming is available for use in all classrooms.</p>	<p>Video streaming is available.</p>	<p>The district subscribes to Learn 360.</p>	<p>Current August 2019</p>
<p>3.7 Promote courses available through NDCDE that provide foundational courses for students, in which they learn technology skills that enable them to integrate the use of technology into other curricular areas.</p>	<p>Necessary hardware and software are in place.</p>	<p>Courses are available.</p>	<p>Current August 2019</p>
<p>3.8 The district teaches Internet safety K-12. The implementation plan includes instruction by teachers, librarians, and counselors.</p> <p>Gr. K-12 uses, Common Sense Media and Google Be Internet Awesome, Applied Digital Skills, Kids Smartz Net for in depth Digital Citizenship.</p>	<p>Internet safety curriculum is taught K-12.</p>	<p>An Internet safety curriculum is provided K-12.</p>	<p>Current August 2019</p>

<p>3.9 Google Apps for Education provides a tool for teachers to connect and collaborate with students to share ideas. GAFE allows for excellent feedback opportunities in real time and to more closely monitor progress throughout a project. Tracking of digital content streamlines the process of evaluating and revising classroom topics.</p> <p>Microsoft Office 365 is available to all students, but utilized on an as requested basis.</p>	<p>Students in grades K through twelve have access to their Google Apps for Education accounts, and @k12.nd.us accounts as requested. The accounts includes all the tools necessary to be productive in today's society using and creating digital content. Students have access to a wide variety of applications to work through their high school graduation and two years beyond graduation.</p> <p>Google Drive and One Drive for Business provides unlimited storage for each student.</p>	<p>In 2010 the FBS district implemented Google Apps for Education. Beginning in 2013 EduTech worked with Microsoft to provide the @k12.nd.us accounts to students and staff. They continue to open additional applications through the process. Google Classroom provides a total classroom experience for the learning environment.</p>	<p>Current</p>
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Goal #4: Fessenden-Bowdon Public Schools use data systems that monitor student achievement and analyze student and school data in order to improve teaching and learning outcomes for all students, including those in all subgroups.

Rationale: Data systems that are integrated into the daily operations assess, monitor, and analyze student achievement in order to differentiate instruction and improve teaching and learning outcomes for all students.

Strategy	Measure	Timeline	Status
<p>4.1 The district implements a student information system to track achievement and allow the analysis necessary to differentiate instruction to better meet student learning needs.</p>	<p>PowerSchool is used to track student and class achievement.</p> <p>Parents and students have access to student grades online.</p>	<p>PowerSchool is upgraded as needed. Parent and student logins and passwords are provided annually.</p>	<p>Current</p>
<p>4.2 Fessenden-Bowdon Public School uses a Multi-Tiered System of Support (MTSS) framework to provide appropriate instruction based on student abilities and needs.</p>	<p>MTSS protocols and pathways assist teachers with identification of student needs.</p>	<p>MTSS protocols are in place.</p>	<p>Current August 2019</p>
<p>4.3 Web-based Electronic Individual Education Plans (IEP's) are used throughout North Dakota.</p>	<p>Web-based electronic IEP's are used.</p>	<p>IEP's are maintained on TIENET.</p>	<p>Current August 2019</p>
<p>4.4 The district implements the use of the State Longitudinal Data System as a means to enable data analysis at the building and classroom levels.</p> <p>Renaissance STAR 360 and NWEA assessment data is used to analyze reading and math skills at all grade and ability levels.</p> <p>Reading Plus and IXL programs are used for math and reading interventions across the district.</p>	<p>Data collected in SLDS are used for analyzing data from NDSA, NWEA, Renaissance Star 360 for teacher analysis and planning.</p> <p>The MTSS Data Coordinator maintains data.</p>	<p>Trainings on the use of data warehouses are held as needed.</p> <p>Progress monitoring occurs on a regular and scheduled basis.</p> <p>The MTSS Coordinator maintains data collection schedules and coordinates data</p>	<p>Current August 2019</p>

		analysis with students and staff.	
<p>4.5 Fessenden-Bowdon uses NWEA and Renaissance Star 360 testing to assess student achievement.</p> <p>Teachers have access to reports for individual students and classrooms.</p> <p>Students have access to their reports so they are aware of their personal progress and learning. Students use the data to set personal learning goals.</p>	<p>NWEA is used is used throughout the district in grades K-12.</p> <p>Renaissance Star 360 is used is used in grades K-6.</p>	<p>Benchmark testing is done fall, winter and spring.</p>	<p>Current August 2019</p>
<p>4.6 The district school improvement plan (Cognia) calls for increased analysis of data gathered by the district to be used in the monitoring and analyzing of student achievement and to drive instruction.</p> <p>Fessenden-Bowdon School District Instructional and Data Coach works closely with the teachers to provide support in evaluating data and implementing strategies in the classroom for continuing success.</p> <p>Data is used to determine student intervention to meet individual needs during FOCUS groups. (Following Ones Course Until Successful)</p>	<p>Data is reviewed and used in planning instruction in the classroom.</p> <p>The Instructional and Data Coach meet with elementary classroom teachers throughout the year to provide support and address concerns or challenges.</p>	<p>Fessenden-Bowdon administrators and teachers will use curriculum based assessments and ND SLDS. Time is allocated for data review and planning.</p>	<p>Current August 2019</p>

Goal #5: Fessenden-Bowdon Public Schools assesses the use of the technology resources implemented in the district.

Rationale: Assessment is necessary to ensure that technology is used effectively and creates new opportunities for learning and promoting student achievement.

Strategy	Measure	Timeline	Status
5.1 The use of technology in instructional strategies is assessed by the Technology Department, administration, and Student Engagement Surveys.	Teachers and administrators are keenly aware of educational practices and technology use in the classroom through the use of the Eleot classroom evaluation tool . This is documented as part of the evaluation process of each teacher. Technology use is also measured as part of our Cognia student review and engagement piece.	Eleot evaluation tools and Student Engagement Surveys will demonstrate instructional growth through the evaluation process based on the tier each instructor is being evaluated on.	Current August 2019
5.2 District technology standards for teachers and students and the district Acceptable Use Policy (AUP) are reviewed to keep pace with changes in technology. Staff sign each policy update, and students or parent/guardians review and sign annually.	The District Technology Committee reviews the tech standards and AUP yearly and is included in the student handbook.	The AUP will continue to be reviewed and evaluated.	Current August 2019
5.3 The district technology plan is reviewed and updated annually. Status of the goals is noted in the plan.	The district technology plan is reviewed and updated annually by the District Technology Committee.	Annual review completed by spring of each year.	Current August 2019

Goal #6: Fessenden-Bowdon Public Schools provides a safe and secure learning environment to meet our district goal of “Learning For All”.

Rationale: Driven by events in schools across the nation providing a secure learning environment, where students feel safe, is essential to today’s society.

Strategy	Measure	Timeline	Status
6.1 The use of security cameras to provide real-time views of student activities throughout the building and on school grounds.	Cameras and monitoring software will be strategically placed in the Fessenden-Bowdon Public School. Monitoring software currently in use is Symphony.	Cameras are in all hallways, gymnasiums, and outside of the building. Cameras were installed in 2015 and additional outdoor cameras in 2016. Continued maintenance and updating is a priority throughout the district.	Current with upgrades scheduled.
6.2 The classroom where our students spend much of their day is their learning zone. Classroom security cameras provide an added measure of safety. These could be set for activation in the event of a security situation.	Cameras and activation switches are placed strategically in classrooms throughout the district.	A SHSGP grant was secured for this project	Installation Completed. Final commissioning February 2020
6.3 District digital and electronic data is crucial to the operations of any district. To secure these files backup occurs for all district servers. An added measure is for the technology department to also provide offsite backup to ensure that all data is safe and accessible.	The district outsources off site backup for all files.	Backup occurs on a regular scheduled basis	Current August 2019
6.4 To maintain the integrity of files, systems, networks and Fessenden-Bowdon Public School District resources it is crucial to have a plan for securing these systems and devices with anti-virus and anti-spyware.	The district technology department installs TRAPS, which is available through the state, to provide an	Annual review will be done each summer.	Ongoing 2020

	extra layer of security. State firewall is in place through EduTech		
6.5 Password protocol is important to maintain a secure system where all district logins are kept at the securest level possible.	The district will set a password protocol to maintain the security of the system.	Protocol will be reviewed by key stakeholders yearly.	Proposed November 2019

One-Year Technology Budget

2225 TECHNOLOGY	2018-19	2019-20
PROFESSIONAL SALARIES	\$41,791	\$65,000
GROUP INSURANCE	\$6,479	\$10,000
DENTAL & VISION INSURANCE	\$350	\$350
SOCIAL SECURITY	\$3,197	\$5,000
TEACHERS RETIREMENT	\$11,602	\$15,000
LUNCH BENEFIT	\$564	\$600
PURCHASED PROFESSIONAL SERVICES	\$10,000	\$5,000
EQUIPMENT REPAIR	\$1,000	\$1,000
PROGRAMS/MAINT	\$30,000	\$25,000
PRINTER MAINT	\$7,000	\$8,000
TRAVEL	\$2,000	\$2,000
SUPPLIES	\$15,000	\$10,000
EQUIPMENT	\$22,000	\$20,000
COMPUTER-ASSISTED - DUES/FEES	\$1,000	\$1,000
Total	\$151,983	\$152,965

Technology Budget Narrative

Fessenden-Bowdon has two part-time staff members in its technology department. The district receives its Internet access through North Dakota STAGEnet. With available funding, the district will “turn over” its computers every three to five years as well as upgrade switches, routers, servers, printers, phone system, alert system, intercom, security cameras etc. during this time frame. And finally, the school district plans to maintain Windows 10 machines for staff and students enrolled in online courses if needed, and maintain Chromebooks for all students. PowerSchool is our administrative student database system.

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PROPOSED UPDATES

2020 - Update the camera and security server (\$26,000)

2021 - Update the Switches for increased bandwidth and new
phone system (Erate \$\$)

2021 - Update the phone system (\$25,000)