

Rugby Public School District #5

Technology Plan 2021-2024



**Respectfully Submitted by
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Technology Department
Rugby Public Schools**

2021

PLANNING PROCESS

The 2021-2024 technology plan was assigned to the RPSD technology staff and will be approved by the superintendent and the Board of Education. This plan will be based on ongoing strategic planning methods unique to our technology needs, goals and initiatives, and is designed with specific goals that will provide a blueprint for district technology efforts. Our vision focuses on providing current educational technologies to enhance student engagement and achievement while being fiscally responsible. This plan recognizes student learning, but also the importance of teacher learning and operational support. Technology committee meetings will be held yearly to revise and prioritize the technology goals at RPSD. The Rugby Public School District technology plan will be placed on our school website for all internal and external stakeholders. The district technology plan is also presented at a public-school board meeting.

TECHNOLOGY COMMITTEE

Name	Position	School
Dr. Michael McNeff	Superintendent	Rugby Public Schools
Jared Blikre	HS/JH Principal	RHS/JH
Jason Gullickson	Ely Principal	Ely Elementary
Jennifer Zachmeier	Technology Coordinator	Rugby Public Schools
Mike Santjer	Technology Integrationist	Ely Elementary
Jessica Fritz	Library Media Specialist	Rugby Public Schools
Ashleigh Blikre	6 th Grade Teacher	Ely Elementary
Jennifer Gault	3 rd Grade Teacher	Ely Elementary
Adam Chaussee	SS Teacher	Rugby High School
Paola Trottier	Business Teacher	Rugby High School
Melissa Tormanen	Junior High Science	RHS/JH

The RPSD Technology Committee members include the superintendent, principals from Rugby Jr/Sr High School and Ely Elementary, RPSD Technology Coordinator and Integrationist, a high school business instructor, RPSD Librarian, an upper elementary instructor, a junior high instructor, and a lower elementary instructor.

TECHNOLOGY VISION

The Technology Vision at Rugby Public Schools is to provide current, reliable, and accessible technology resources for all students and staff, and relevant professional development and support for our teachers. Our vision will promote individual access to digital tools, 21st Century Skills, digital citizenship, personalized learning, and collaboration. RPS's technology department will strive to provide technology in a thoughtful, healthy balance to its students. To achieve this, all technology planning, purchases, and deployment locations will center around what technologies will have the most significant impact on student achievement.

EQUIPMENT SUMMARY:

Teachers are issued a laptop. Laptops come with a 3-year warranty and are kept with the assigned user for five years. At the end of the hardware’s lifecycle, equipment is repurposed elsewhere in the district, or sold to staff, or discarded.

Students are assigned iPads in Kindergarten and Chromebooks in grades 1-12. These devices come with a 1-year warranty and are kept in their locations for five years. At the end of their lifecycle, they will be sold to staff or students or discarded.

Projectors, printers, document cameras, and other peripherals are not currently on a scheduled replacement.

The following table is a summary of the technology equipment that is available in our district for student and staff use. This includes the Early Learning Center, Ely Elementary, and the Rugby Jr/Sr High School.

	Staff Devices	Student/Lab Devices
Computers assigned to teachers, food service, office staff, and custodial.	62 Teacher 2 Food Service 6 Office 2 Librarian 1 Custodial	Student Labs: A111 -- 18 PCs A113 – 18 PCs HS Library – 12 PCs, 1 iMac Ag. Classroom – 8 PCs Sjol Student Center – 3 PCs
Chromebooks		650
iPads	3	63
Interactive Boards/Projectors	52	
Printers	64	HS Library (2); Business Lab A113 (2); Business Lab A111 (2)
Document Cameras	51	
Servers	3	
3D Printer	1	HS Library (1)

TECHNOLOGY DEPARTMENT GOALS

- 1. Streamlined Communication to Stakeholders**
- 2. Robust Infrastructure**
- 3. Safe Online Environments**
- 4. Reliable Back-up and Security**
- 5. Technology Rich Learning Environments**
- 6. Current Technology Resources**
- 7. Support for Educators**
- 8. Technology Standards for Students**

1. STREAMLINED COMMUNICATION TO STAKEHOLDERS

Internal and external communication is a vital part of student achievement. With the latest advancements in education and the shift from in-person learning to distance education and blended learning, the list of stakeholders that schools must keep apprised of their activities and direction has expanded. RPSD strives to provide clear communication to all stakeholders by using the methods outlined below.

School Website:

The school website provides continuous online content that is easily accessible by staff, students parents, and the general public. Our current school website was launched in August 2018 and is the largest and most up-to-date source of information about our school. Below is a list of communication, services, and support provided on the RPSD website.

*Building links: Links to Ely Elementary, RHS/JH, and the Early Learning Center.

*Contact information: Contains email addresses for staff of RPSD and both email and phone numbers for administrative offices.

*Calendars: Current activity calendars and yearly school calendar, as well as a sports calendar.

*Announcements: General announcements are placed on our home page, as well as weekly announcements. Special announcements are also done through our school app and Facebook.

*Food Service: Information is provided on RPSD food service and all menus are posted, along with free & reduced application information, meal prices, nutrition tips, etc.

*School Board: A school board page listing our current school board members, along with current meeting minutes and agendas.

*Employment Link: Current job openings are posted on this page with contact information.

*Technology Page: A technology page is provided with helpful links and general technology updates and activities in the technology department.

*Library Page: A district library page is maintained by our Library Media Specialist.

*Student Meal Payments: A link to our online meal payment system.

*PowerSchool: PowerSchool links are posted for student grades and attendance information.

Classroom Sites:

Teachers have been provided classroom websites that are linked to our district website. Teachers post lesson plans, notices, and communicate other classroom information to students and parents.

Google Classroom:

Google Classroom streamlines the process of communication and sharing files between teachers and students, both in person and through distance education.

Mass Notification System:

Our Blackboard Mass Notification system is used to push out notifications for storm closures, delays, cancelations, or other reminders as needed.

School App:

RPSD utilizes a school app, which integrates into our school website and mass notification system. Our school app has the ability to do push notifications, post to our official Rugby Public Schools Facebook page, send emails to stakeholders, and text messages.

Social Media:

Links are placed on our website to the official Rugby Public Schools Facebook page. The Rugby Public Schools official Facebook page is managed by the technology coordinator, superintendent, and other staff as needed, based on information being posted.

First Class:

First Class is our internal staff messaging system. First Class is used primarily for day-to-day staff communications and notices from the school offices.

Email:

Every staff member at RPSD is provided with an @k12.nd.us email address. These are their primary school email addresses. Every teacher and student at RPS is also provided an @rugbyschools.org GMAIL address for streamlined communication in the Google platform.

2. ROBUST INFRASTRUCTURE

Connectivity:

Network connectivity and Internet access continue to be a crucial part of our everyday needs. STAGEnet provides RPS with internet access, firewalling, web filtering, and other services. STAGEnet is the statewide network that was created by the 1999 legislative session and focuses on providing broadband connectivity, Internet access, and other networking services. All state agencies, colleges, universities, local government, and K-12 are required to participate in STAGEnet.

The district leases fiber from ND Telephone. The fiber provides connectivity from each building to the main line in for Rugby Public Schools. Our fiber between buildings is single mode dark fiber. The fiber lease costs are eligible for E-rate discounts.

In March 2019, NDITD installed a new firewall. RPSD was given a VPN for external access to the security camera DVRS.

Network:

Our network infrastructure provides secured wired and wireless services. Rugby Public School district strives to provide a robust network to support the rapidly growing demands of today's educational technology needs. Each instructional classroom at RPSD is equipped with at least 2-4+ CAT6 data drops for high-speed connections. Additional drops are provided in offices, computer labs, libraries, and work rooms. In the fall of 2020, the entire backbone of the district's network was upgraded. All switches were replaced with GB Extreme Smart switches to support increased network demands due to distance education and video streaming instruction. The demand for wireless connectivity has also increased significantly over the past couple of years. In December 2020, we completed a full replacement of our wireless platform to provide stronger more reliable coverage. We will continue to assess needs and schedule the deployment and replacement of network equipment as necessary to accommodate future technology loads.

Servers:

Rugby Public School relies on three servers: Ely Server1, HS Server, and Sym Server. The Ely Server1 hosts the Active Directory for all of our elementary users, in addition to Back Up Exec software. The HS Server hosts the Active Directory for all of our high school users. The Symserver hosts our First Class messaging service.

The High School server was replaced in December 2019 and the Ely Server1 was replaced in September 2020. The district considered using "cloud-based" options for servers and back ups, but found that it was most cost-effective to continue using physical in-house servers and back ups due to the amount of data we needed backed up. However, we have moved several more critical items to cloud-based options, such as the business manager software, our antivirus service, our school website, etc. Our new grading system (Empower) will also be housed off-site.

RPSD is currently registered as a Google Workspace for Education (Fundamentals) School (Formerly G Suite for Education). GWFE provides all school district users with Google accounts which offer limited cloud server storage space – which has been a change from their previously unlimited storage. As we have moved forward without our 1:1 Chromebook deployment, students and teachers transitioned gradually into the Google "cloud" giving them universal access to their documents and files (at no extra cost to the district), while at the same time, decreasing our internal server demand. Due to the changes happening with Google in the summer of 2021, we will have to explore the option of a paid Google subscription.

3. SAFE ONLINE ENVIRONMENTS

School Filter:

RPSD utilizes the filter through ND ITD for in-school filtering. RPSD Internet filtering decisions are made according to the district's Acceptable Use Policy. Acceptable Use Policy guidelines are reviewed and amended at school board meetings on an annual basis prior to the beginning of each school year. Refined filtering decisions are made by the technology committee with input from all teachers via their written requests.

Anti-Virus:

RPSD subscribes to anti-virus software with ND ITD called Palo Alto Cortex. Cortex is managed by staff at ITD.

Firewall:

In March 2019, ND ITD installed a new firewall in our building. The new firewall prohibits any outside connections. A VPN was created with access given to specific users to access our internal servers from outside of our buildings as needed. Currently, the only devices requiring external access are the security camera DVRs and our Symserver with First Class.

Chromebook On/Off Site Filtering and Monitoring: In addition to on-site filtering, the district utilizes Blocks i monitoring and filtering software to ensure students' safety online while out of school using school-owned devices. Blocks i filter categories are similar to the in-school filter categories. Blocks i allows student data to be monitored and pulled up for viewing on an as-needed basis. Additionally, classroom teachers have the option to monitor their individual classroom Chromebook use with the embedded "Teacher Dashboard." Monitoring of student devices is limited to M-F, 8 am to 4 pm. Filtering is always enabled .

4. RELIABLE BACKUP AND SECURITY

Server Backups:

All district servers are backed up at regularly spaced intervals for recovery purposes. The data is backed up between the two schools, rotating the backup sets. Backup Exec software is our tool for recovering data.

Security Camera Systems:

Technology contributes to securing our schools with the use of video surveillance systems. We utilize a DVR at both Ely Elementary and Rugby JH/HS. We also monitor the armory classroom and locker rooms - spaces that the district leases from the city of Rugby. This network setup allows IP cameras to record to each DVR. This solution provides viewing and management with the LuxRiot app. Administrators can recover footage for school personnel or law enforcement on an as-needed basis.

5. TECHNOLOGY RICH LEARNING ENVIRONMENTS

Classroom Technology:

Teachers have access to technology resources that allow them to provide more engaging and effective learning opportunities for all learners. The technology department will ensure that the learning environments, both in school and online, are current and meet the needs of all students.

Each classroom will include:

Teacher Laptop with docking station (if requested)
Document Camera
Black and White Laser Printer
Sound systems (Surround sound/Pendant mics/RedCat/Jabra speaker, etc)
Promethean Activboard/Interactive Projector/Whiteboard

Other equipment also available to enhance instruction:

Tablets/iPads (Ely Elementary School)
Chromebooks
Networked color printers
USB inkjet printers
Digital Cameras
Camcorders
Scanners
3D printers

Student Devices:

RPSD believes in maintaining equity in technology for all students by ensuring all students have equal access to technology. All student devices will be up-to-date and support standardized testing and all other district apps as needed. RPSD will maintain an adequate number of devices to accommodate users per location and will maintain a 1:1 student to device ratio as follows:

Kindergarten	Classroom-based iPad access. Devices used in school only. Devices can be sent home on an as-needed basis.
Grades 1-6	Classroom-based 1:1 Chromebook access. Devices used in school and are sent home as needed.
Grades 7-12	1:1 Chromebook access. Devices assigned to each student with carrying cases to carry to and from home at the beginning of the year. Devices are collected at the end of the year.

Software:

RPSD subscribes to or purchases several software programs and extensions each year that enhance 21st Century Learning. Software requests beyond the basic image installations are submitted by teachers and approved by administration.

Our basic district image includes:

- **Windows 10** -- Operating software
- **Microsoft Office 365** – Productivity suite with Excel, Word, PowerPoint, Publisher
- **First Class** – Internal messaging service
- **Cortex Palo Traps** -- Anti-virus
- **ActivInspire** – Promethean active board flip chart software to use with interactive systems

Additional Software and extensions available at RPSD:

- **BrainPop** - Engages students through animated movies, learning games, interactive quizzes, primary source activities, concept mapping, and more
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- **EdHelper** -- Online subscription service that provides printable worksheets to teachers
- **Google Sites** -- Teachers maintain a classroom site with information for parents and students
- **Google Apps for Education** – A suite of web-based collaboration applications that Google hosts, such as Classroom, Docs, etc
- **Follett Destiny** – Web-accessible database of library listings within the district
- **RAZ Kids** -- Online guided reading program with interactive eBooks, downloadable books, and reading quizzes
- **Finale** -- Lets users compose, arrange, notate, etc.
- **Office 365** – An email suite with OneDrive and access to 5 licenses per user of Microsoft Word, PowerPoint, and Excel. Unlimited online storage space is provided for educators
- **Kami** -- PDF editing extension
- **Membean** -- English Department uses for vocabulary building
- **Screencastify** -- User-friendly screen recording and sharing extension for teachers
- **Zoom** -- District streaming purposes
- **Nearpod** -- Interactive lessons
- **IXL** – Subscription bases learning enhancement
- **Keyboarding Online** – Online keyboard lessons
- **Photoshop** – Yearbook design use

- **Dreamweaver** – Desktop publishing student use
- **SeeSaw** – Elementary instructional platform for students
- **Blocksi** – Chromebook filtering and Teacher Dashboard for student Chromebook monitoring

Testing:

Technology assists administrators, teachers, students, and parents in the administration, collection, analysis, and reporting of learning progress, and allows the district to see that students have achieved essential standards that will prepare them for the next level of learning. RPSD will maintain sufficient student devices and meet the network requirements for district-wide administration of the NDSA and NWEA assessments. The technology coordinator will manage the configuration of all testing devices. Both testing platforms are available online through secure browsers and are accessed through kiosk apps on school Chromebooks or iPads.

The technology coordinator and technology integrator work with the school counselors on scheduling the testing sessions, as well as making sure devices are updated and configured properly for testing before each testing session. Technology staff will also provide support to proctors during all live testing sessions.

6. CURRENT TECHNOLOGY RESOURCES

A replacement schedule helps the technology coordinator keep devices current and to plan for the budgeting, rotation, and deployment of equipment. It had been standard practice to rotate equipment on 4-year schedule. However, beginning in 2016, RPSD began to rotate computers on a 5-year rotation schedule, and Chromebooks on a 5-6 year rotation schedule. Peripherals will continue to be replaced on an as-needed basis.

This rotation schedule is always subject to slight changes due to staff changes, equipment availability, need changes, and budget changes. It is simply used as a guide to help the technology coordinator plan the budget and is used for communication with the superintendent and school board for their use in district financial planning.

2015	2016	2017	2018	2019
<u>Chromebooks (113)</u> Grades 6, 7, 8 Santjer, Groves, 4 JH Jansen Lab (18) McNeff Laptop Ely Teacher Laptops (23) Repurposed Jansen Lab to Sweet, Johnson, Stricker Repurposed McNeff laptop Repurposed Ely laptops in rooms	<u>Chromebooks (120)</u> Grade 5, HS English Duchscher, Risovi, Johnson, Miller Laptops: Blikre, S. Johnson, Sweet, Walker, Grove, Grochow Desktops: Ely Librarian HS Art: Proj. Ag Plasma cutter PC Move old LT to HS Art	<u>Chromebooks (100)</u> HS Soc. Stud, HS Sci. Leier, Chausse, Kemp, Hagen Ely Lab Lenovo LT (24) Desktops: Zwingel, Ebach, Okke HS Band: Proj Move DT to Julie Sjol student center	<u>Chromebooks (45)</u> Ely CB Cart (25) HS Health Green (20) Tech. Intg. CB (7) Goven Proj. Kinder. Projectors: Bartsch, Wurgler, Heilman Desktops: HS Art NUC Trottier Lab (18) *CP *Ely CB cart went to Gault in 2020	<u>Chromebooks (56)</u> Grade 6 Groves (25) & Goven (6) Grade 3 Paul (25) HS Teacher LT (25) Business Mgr LT HS Server (replace in 8-10 yrs) Desktops: Leer NUC 1 st , 2 nd Gr. Boards/Proj (Thiel, Johnston, Sobolik, Williams, Yoder) Hauk old LT to Art *Old 6 th CB to Harbaugh in 2020 *Santjer CB to Paul 3 rd in 2020
2020	2021	2022	2023	2024
<u>Chromebooks (225) \$60,000</u> (4)Foster & (4)Bush, (6)Johnston & (6)Blikre 7 th : Ralph, Tormanen, Seykora, Geisinger Extra 20 for COVID in HS Lib. storage A113 NUC Lab (18) *CP \$1,200 ea. McNeff Skull NUC \$1700 Ely Teacher LT (31) \$999 Desktops: Ely Sec. NUC \$1,100 Gr. 3-6 and JH Proj. 5 Gault, Paul, Harbaugh, Foster, Bush, Duchscher, Blikre, Groves, Johnston, Mattson, Thoreson *Added new 6 th grade this year Groves took his CB to modular Savannah took hers to 3 rd Ashleigh got new ones in 6 th *District Wifi install & switches Ely Server	<u>Chromebooks (200) \$56,000</u> Grades 1-3 20 each: Thiel, Yoder, Sobolik, Williams, Harbaugh (HS) 25 each: Lemer, Jacobs, Chaussee, Bacon Laptops (6): J. Blikre, Welk, Sweet, Walker *Welk wants Macbook P. Harmel, Trottier \$1,400 ea. Desktops: Ely Librarian, Zachmeier \$1,200 ea. Sweet's to repurpose, possibly to her para Ely Sound Systems? \$35,000	<u>Chromebooks (180)</u> <u>\$49,000</u> Grade 5: Risovi, Duchscher Santjer: 7 Grade 3: Gault HS: Johnson, Miller, Green, Erpelding Desktops: Lake, Okke \$1,200 ea. Desktops: Ag (6) *CP \$1,000 ea. Walker Math Cart? \$20,000 HS projectors, as needed? \$20,000	<u>Chromebooks (0)</u> <u>HS Soc Stud, HS Sci</u> <u>Desktops: HS Art NUC</u> \$1,200 <u>Trottier Lab (18) *CP</u> \$1,200 ea. <u>Projectors: 10-15 High</u> <u>School Rooms</u> \$50,000? <u>HDMI cable upgrade @ HS</u> \$3,000	<u>Chromebooks (60) \$15,000</u> Teachers Paul, Groves, Goven HS Teacher LT (25) \$32,500 Business Mgr LT \$1,300 Louanne Leer NUC \$1,100 Miscellaneous Hardware: Printers, projectors, etc.

7. SUPPORT FOR EDUCATORS

Technology Support:

Reliable access to technology is imperative. Technology trouble-shooting assistance is available to teachers daily during scheduled technology work time from the technology coordinator and technology integrationist. These hours vary due to extra duties assigned to these positions. The District Technology Coordinator will provide technology support to the Early Learning Center, Ely Elementary, and Rugby Jr/Sr High School. The Technology Integrationist will provide support at Ely Elementary, and assist as needed at the other buildings. Staff will utilize First Class to submit help requests. The technology coordinator and integrationist will strive to provide support in a timely fashion to assure streamlined classroom technology use.

Technology Training & Professional Development:

Formal training on new equipment and software and day-to-day assistance will be provided for teachers to ensure proficiency in all classroom technology. Technology Professional development will be timely and relevant and strive to meet needs assessed through a yearly survey given to teachers.

Some entities that are available to provide professional development within the Rugby Public School District are RPSD technology staff, instructional coaches, EduTech trainers, professional trainers from vendors (Connecting Point, Empower), and Google (online training). Professional development meetings with building principals and instructional coaches will also provide assessment of technology skills and needs through their observation.

It is important that we provide opportunities for teachers to learn and explore new technologies to inspire them to provide more engaging and effective learning opportunities. Technology staff will join efforts with administration and instructional coaches to identify other needs and then plan for learning opportunities based on feedback. Future training sessions may be scheduled throughout the school year during Professional Learning Days that are built into our school calendar.

8. TECHNOLOGY STANDARDS FOR STUDENTS

RPSD's technology plan will work towards continuous improvement to develop the student skills necessary to continue their education or begin skilled careers. As technology advances, our technology standards will also advance and adapt to improve and individualize student achievement.

RPSD will reference North Dakota Library Technology Literacy/Standards, in addition to ISTE standards in its technology education in grades K-12. ISTE Technology Standards for Students are designed to empower student voice and ensure that learning is a student-driven process. These standards will be shared with teachers in grades K-12 and will be posted on our school website for reference.