FARMINGTON RIVER REGIONAL SCHOOL DISTRICT
FARMINGTON RIVER ELEMENTARY SCHOOL
555 NORTH MAIN ROAD, OTIS, MA 01253

Farmington River Regional School District Technology Plan 2017-2021

www.frrsd.org

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Executive Summary

The Farmington River Regional School District is located in Otis, Massachusetts, in the southeastern corner of Berkshire County. The District is comprised of students from Otis and Sandisfield. The combined population of both towns is about 2000. Both communities are beautiful, rural woodland areas with waterways such as the Farmington River and the Otis Reservoir. Wildlife abounds and open spaces are valued and maintained by local, state and federal agencies. There is no industry in either town; a few small businesses and restaurants dot the roadside. Public transportation is not available and that leaves students isolated from enrichment activities, although the Berkshires are filled with dance, theater, music, artists, artisans, authors, and historic places of note. There is a public library in Otis. Both communities attract large numbers of summer visitors who own/rent property on the waterways and in the woods but are only here from June through August.

The Farmington River Regional School District is part of the Small Rural Schools Network. The District is comprised of one school which houses approximately 150 Pre-school through Grade 6 students from Otis and Sandisfield. **(Students who complete Grade 6 are tuitioned out from our District to Lee or Southern Berkshire Regional School District)** A full range of academic and support services is offered to students in regular, special, Enrichment, and Title I education. Students also receive weekly instruction in art, music, physical education, health, Library Media, and instructional technology; foreign language exploration is offered to students in grades 4-6. There are many intramural offerings, as well as an art club, chess club, chorus and drama groups, band, scout troops, and a variety of after school, outdoor activities. Our students are well versed in outdoor activities in all seasons, learned from family and community members.

Due to the isolated area of the two towns that make up the school district, many homes do not have access to DSL, "dial up" or satellite internet. If students do not receive equitable and high quality technology training at school, as well as the application and experience using the technological skills they learn at school, they will not be on a level playing field with their 7th grade colleagues when they move on to middle school in other communities that are more suburban.

Benchmark 1
Commitment to a Clear Vision and Implementation Strategies

A. The districts technology plan contains a clearly stated and reasonable set of goals and implementation strategies that align with the district-wide school improvement plan. The district is committed to achieving its vision by the end of the school year 2020-2021

FRRSD Technology Vision and Goals

District Mission Statement

The Farmington River Regional School District is committed to providing a quality educational experience that is appropriate for all aspects of a child's development and includes the family, staff and community in a meaningful way. It is our goal to provide each and every child with the values, knowledge and skills needed to achieve full potential in his or her personal and work life and to contribute actively to the civic and economic life of our diverse and changing democratic society.

District Technology Mission Statement

Farmington River Regional School District will incorporate technology as a natural part of the educational process. Through an integrated, comprehensive framework governing the acquisition, application, and evaluation of all aspects of technology, the District will ensure that all students become proficient in the use of technology. Staff, *at* all levels, will receive training and equipment necessary for them to properly perform their professional work. Parents/guardians and community members will be offered training in the current trends and applications of technology.

District Vision Statement

To attain our vision of excellence for all students in a challenging, supportive and welcoming environment.

District Technology Vision Statement

It is the vision of the Farmington River Regional School District that technology will assist our students in becoming skilled, knowledgeable and self-directed learners. Students will use technology on a regular basis, integrated into the curriculum, to investigate real-life situations, individually and in small groups.

It is also the vision of the Farmington River Regional School District that all staff will become efficient and effective in facilitating and managing the learning environment so that every student can achieve excellence.

GOALS

1. Bring technology into the classroom in order to benefit students, faculty, and administrators.
2. Meet the criteria set forth by the State of Massachusetts.

Curricular and Instruction
- all students will be able to utilize technology to effectively communicate information and ideas
- all students will be able to use technology to access and analyze information in order to solve cooperatively complex real-world problems
- students will be aware of the appropriate ethical standards in accessing and incorporating acquired information
- all students will be able to utilize communications to access information and data to support individual and group research

Faculty and Technology
- technology will be used to enhance independent and collaborative learning
- faculty will gain knowledge/skills to assist students in the effective utilization of technology to support research
- faculty will use technology to manage the authentic assessment of student learning

System Management
- disaster recovery plan is implemented & ensures safe data management
- technology will be used to interconnect all school district services
- staffing requirements will be assessed annually to ensure proper support of technology hardware, software and integration
- system security for both hardware and software will be maintained, including virus protection, spyware/malware/bot protection, spam/phishing protection, website filtering and firewalls
- replacement procedure for all Intel/AMD Windows OS computers and tablets will be every four to five (4-5) years

Communication
- the local area network (LAN) and wireless LAN (WLAN) will facilitate information interchange among all classrooms, offices, and work spaces
- all students and faculty will have access to communication equipment and a LAN or WLAN in order to research information through the public Internet
- through the use of technology, communication will be enhanced between schools, staff, faculty, parents, students and the community

B. The district has a technology team with representatives from a variety of stakeholder groups, including school committee members, administrators, and teachers. The technology team has the support of the district leadership team

Technology Team

FRRSD has a Technology Team with representatives from a variety of stakeholder groups including administration, staff, faculty, students and other community members. The Technology Team has the support of the FRRSD Administration and the FRRSD School Committee.

Technology Director	Laurie Flower
Classroom Teacher (Grade 5)	Christopher Keller
Enrichment Library Media Teacher	Rachel Cannon
Classroom Teacher (PE Health)	Jenna Gangell
Classroom Teacher (PreK)	Rebecca Hamill
Director of Student Services	Mike Saporito
Community Member / PTO President	Wendy Berman

The Technology Team meets regularly throughout the school year and we meet with the students in grade 6 as well.

C. Needs Assessment

1. The district assesses the technology products and services that will be needed to improve teaching and learning.
   Farmington River Regional School District assesses the technology products by conferring with all stakeholders. We get input from administration, staff and students as to what their needs are through online surveys. Next, we look at how we can accomplish these tasks within our budgetary constraints. For software acquisitions we look to our Software subgroup to get information regarding new software products the staff would like to implement. They research and test products to see if they would be worthwhile.
2. The technology plan includes an assessment of the services and products that are currently being used and that the district plans to acquire.
   We use various methods to obtain information about services/products that are currently being used and those that we are wanting to acquire. We set up pilot programs for software/hardware products that we want to acquire to see if they fit within our technology infrastructure and if they will be utilized in the actual setting. For those products that we already have in place we use various methods to assess their usage. We use data analysis to assist us in whether a product is actually helping the students. We get input from staff that uses the products to see if they are 1. Using them and 2. Do they seem effective in their use?

D. The district has a CIPA-compliant Acceptable Use Policy (AUP) regarding Internet and network use. The policy is updated as needed to help ensure safe and ethical use of resources by teachers and students. Farmington River Regional School District has a CIPA-compliant Acceptable Use Policy for Internet and Network use. We update the policy as necessary. All staff and students must sign an AUP

E. Budget

1. The district has a budget for its local technology plan with line items for technology in its operational budget.
FRRSD has a technology budget prepared each year by the Director of Technology, with input from administrators and staff. This budget contains items needed to continue our technology plan, within budgetary constraints set before us by the School Committee.

2. The budget includes staffing, infrastructure, hardware, software, professional development, support, and contracted services (including telephone services).
FRRSD has a technology budget that includes staffing, infrastructure changes needed, hardware procurement (based on a 4-6 year replacement plan for computers, and new acquisitions needed to continue our technology growth), software, professional development, support and necessary contract services.

3. The district leverages the use of federal, state, and private resources.
FRRSD uses federal state and private resources as necessary to maintain our current infrastructure and to make changes as needed, due to increased demands.

4. For districts that plan to apply for E-rate reimbursement, the technology plan specifies how the district will pay for the non-discounted portion of their costs for the services procured through E-rate. FRRSD completes an E-rate application each year for Internet services and phone services as applicable.

F. Evaluation

1. The district evaluates the effectiveness of technology resources toward attainment of educational goals on a regular basis.
    A. FRRSD evaluates all technology resources based on information we received from administration, staff and parents and students if necessary. We look to our data analyst for input on whether the resources we use are actually working toward the educational goals set forth by the School Committee and the Administration.
    B. Teachers will be required to complete a survey based on the STaR Chart at the end of each year. This will be used as an evaluation tool to help in determining the effectiveness of the technology plan.
    C. The Technology Team will re-evaluate the technology plan annually with results pulled from all surveys of teachers, staff and parents.

2. The district's technology plan includes an evaluation process that enables it to monitor its progress in achieving its goals and to make mid-course corrections in response to new developments and opportunities as they arise.
    A. FRRSD evaluates all technology resources to make sure that they are helping us attain our educational goals. We do this by using data analysis provided by the products themselves or through our own data analysis.
    B. We will be implementing the use of the TSAT for all teachers to help in the evaluation process. The hope is that the TSAT will help us streamline professional development for the teachers as well.

Benchmark 2
Technology Integration and Literacy

A. Technology Integration[1]

1. Every teacher in every grade and subject area is given school-owned technology upon being hired. Each staff member is given a school email account and has free access to the school's network. Teachers and Paraprofessionals can take the technology tools home and they can keep them year round, for coursework, planning lessons, and any other school-related tasks.

2. **Outside** of **the Classroom** - The goal: 90% of teachers use technology every day, including lesson planning, student assessment, administrative tasks, communications, and collaboration and that they share information about their uses with each other.

3. **Within the Classroom** - The goal: at least 100% of teachers use technology appropriately with students each week. Examples of usage are: research, multimedia, simulations, data interpretation, communications and collaboration.

B. Technology Literacy

1. It is the goal that as technology is upgraded in classrooms, it will be used as a tool for differentiated learning. Additionally, all teachers can access the Computer Lab with their students when the Technology Coordinator is not conducting student classes. Teachers can borrow two carts of student tablets from the Computer Lab, for use in the classrooms and library media center.

2. **At least 90% of students from grades 4-6** show proficiency in all *Massachusetts Recommended PreK-12 Instructional Technology Standards* for their respective grade level. The Technology Coordinator and the Technology Paraprofessional provide weekly instruction in the Computer Lab to all students in Grades K-6, using the state technology standards as the weekly curriculum lesson guide.

3. **At least 90% of teachers are working to meet** the proficiency level as defined by the TSAT. This would be measured by teachers taking the test either on line or on paper. This is part of the teacher evaluation process.

C. Staffing

1. The district has a fulltime district-level technology director/coordinator.

2. The Technology director/coordinator provides all student instruction in the Computer lab, arranges/provides staff training, maintains the network, trouble-shoots and repairs all software and hardware, and oversees the implementation of the District's Acceptable Use Policy. Additionally, the IT Coordinator provides updates in technology policies (i.e. cyberbullying, social networking, etc.), and also serves on relevant District committees.

3. The district has staff dedicated to data management and assessment. They are dedicated to making sure that all data is properly input into our database. We also have a member of our staff that is dedicated to assessing our data.

4. The District makes a commitment to provide timely in-classroom technical support with clear information as to how to access this support, so that technical problems will not cause disruptions to teachers' use of technology in the classroom.

Benchmark 3
Technology Professional Development

A. At least 85% of district staff will have participated in 45 hours of high-quality professional development[4] that includes technology skills and the integration of technology into instruction.
B. Technology professional development is sustained and ongoing and includes coaching, modeling best practices, district-based mentoring, study groups, and online professional development. The professional development includes concepts of universal design and scientifically based, researched models.
C. Professional development planning includes an assessment of district and teachers' needs. The assessment is based on the competencies listed in the Massachusetts Technology Self-Assessment Tool.[5]
D. Administrators and teachers consider their own needs for technology professional development, using the technology self-assessment tools provided by the Massachusetts Department of Education or similar tools.[6]

Benchmark 4
Accessibility of Technology

Year Goals for implementation of equipment and software:

Year 1: (2017-18)	Replace 25 Computers – 5-8 year old computers Replace Linksys routers with Sonic Points Replace Server (Windows 2003) with (Windows 2012) Replace Firewall
Year 2: (2018-19)	Replace 10 computers – 5-8 year old computers Increase Broadband Speed to 20mbs Implement usage of Google Classroom in grades 4-6 Introduce document cameras in Grades PreK-1 Improve classroom sound systems in Grades 4-6 Introduce new projection systems PreK-1 Introduce new headphones and mice in lab
Year 3: (2019-20)	Replace 10 computers – 5-8 year old computers Introduce second student response system (mimio vote) Replace 10 tablets – 5 year old tablets Improve Broadband Speed to 30mbs Improve classroom sound systems in Grades PreK-3
Year 4: (2020-21)	Replace 16 Teacher Laptop Computers – 8 year old computers Replace 10 computers – 5-8 year old computers Improve Broadband Speed to 50mbs
Year 5: (2021-22)	Replace 10 tablets – 6 year old tablets Upgrade Mimio systems Grades 4-6 Improve Broadband Speed to 100mbs

Goals:

1. Evaluate, upgrade and replace technology as needed to meet the FRRSD District's recommended benchmark of a 2:1 computer to student ratio of recommended "type A" computers, as required by PARCC.
2. Provide opportunities for students in our two rural towns to become proficient in the use of controlled/monitored Internet technology at school.
3. Work with community members to improve Internet access for students at home.
4. Provide appropriate technology staffing to support student and staff training as well as maintenance of our computers, network and website, as recommended by the benchmarks.
5. Continue to provide data driven High Quality Professional Development to all staff, faculty and administration.
6. Continue to provide faculty with in-house Curriculum, Instructional and Assessment Technology support and instruction to assist staff in integrating technology into all subjects of the curriculum.
7. To provide information to our District's parents/guardians and community members so that they can acquire an understanding of the current trends and applications of technology.
8. Continue to provide the tools and high quality training to all subject area teachers (regular education, special education, Title I, and special subject teachers) so that they can provide school wide enrichment activities within their classrooms.
9. Provide high quality technology instruction to all teachers and support staff in the use of technology to assist in providing differentiated instruction to all students ranging from Special Education through Gifted and Talented.
10. In the Library Media Center.
    a. Provide electronic tools and training for all students in multiple research skills and ways to acknowledge source material.
    b. Evaluate, upgrade, and replace technology as needed, to manage the circulation of library materials.
    c. Explore and implement ways for students to access the school library circulation from home after school hours.
11. Continue to provide and update the tools and software to disseminate any required data collection, including, but not limited to attendance data, MCAS data, SIMS data, EPIMS data, financial data, student grading systems and any required reporting by the DESE or Federal Government agencies, including the Federal Breakfast/Lunch Program, state and federal grants.

A. Hardware Access
1. The district has an average ratio of fewer than five students per high-capacity[7], Internet-connected computer. The District will work with stakeholders to review the capacity of the computer on an annual basis. (The goal is to have a ratio of fewer than two students per high-capacity, Internet connected device. A long-term goal (2017-2021) is to provide new high capacity devices to replace the laptop computers in the Computer Lab and to maintain a 1:1 ratio of high capacity devices for each student in Grades 4-6, while attaining a 3:1 ratio of laptop computers in Grades K-3.
2. The district provides students with access to portable and/or handheld electronic devices appropriate to their grade level.
Farmington River Regional School District uses laptops, tablets, standard response devices and other handheld electronic devices for students as necessary.
3. The district maximizes access to the general education curriculum for all students, including students with disabilities, using technology in classrooms with universal design principles and assistive technology devices.
Farmington River Regional School District supplies the necessary equipment for students with disabilities on an as needed basis – this includes hardware and software and assistive technology devices. All classrooms are supplied with Whiteboard technology, document cameras and speakers.
4. The district has established a computer replacement cycle of five years or less as long as budgetary constraints allow.
5. The District will continue to provide each professional staff person with a high capacity, internet connected computer.

B. Internet Access
1. The district provides wireless connectivity to the Internet in all classrooms, offices, and work areas. Farmington River Regional School District has an Internet connection via their network for each classroom, for both staff and students.
2. The district provides a wireless fiber network with bandwidth speed of at least 15mbs to each classroom, office and workspace. The network card for each computer is at least 100Mb/1Gb.

C. Networking (LAN/WAN)
1. Farmington River Regional School District has a 1Gb Cat 5e/Cat 6 switched network and we have recently installed four high performance sonic points with 802.11n wireless LAN (WLAN) connectivitiy.
2. The district provides access to servers for secure file sharing, backups, scheduling, email, and web publishing, either internally or through contracted services.
3. Farmington River Regional School District has dedicated server space for staff and students. On the staff side, every member has access to email, scheduling and file sharing. On the student side, every student has access to programs and file storage. Grade 4-6 students have their own accounts with a place to store all files that they work on. Grade K-3 students have shared ids with a shared file storage location.

D. Access to the Internet Outside the School Day
1. The district works with community groups to ensure that students and staff have access to the Internet outside of the school day.
Farmington River Regional School District allows students to access student computers outside of the school day. Staff members also give students information on where they can access the Internet in their own communities, such as the city/town library. Staff members are allowed to use their computers to access the Internet outside of the school day too.
2. The district web site includes an up-to-date list of places where students and staff can access the Internet after school hours.

E. Staffing
1. The district provides staff or contracted services to ensure that its network is functioning at all times. The Technology Director provides primary support for net infra-structure in all buildings. A third party provides support in emergency situations and when network upgrades are required.
2. The district makes a commitment to provide timely in-classroom technical support with clear information about how to access the support, so that technical problems will not cause major disruptions to curriculum delivery.
Problems are reported via email or phone to the Technology Director. The Technology Director provides sole support for resolving all technical problems that have been reported. In most cases, these issues are handled in a timely manner.
3. The district provides at least one FTE person to support 200 computers/laptops. Technical support can be provided by dedicated staff or contracted services.

Benchmark 5
Virtual Learning and Communications

A. The district encourages the development and use of innovative strategies for delivering specialized courses through the use of technology. Farmington River Regional School District is continually researching various on-line learning solutions for all staff and faculty. Teachers are using technology in the classroom (Interactive whiteboards, projectors, document cameras, classroom sound systems, student response systems, web-conferencing, blogging, etc).

B. The district deploys IP-based connections for access to web-based and/or interactive video learning on the local, state, regional, national, and international level. Farmington River Regional School District has the infrastructure to allow for web-based and interactive video learning.

C. Classroom applications of e-learning include Pearson curriculum for Math and ELA, IXL, Read Live Nautrally, cultural projects, virtual field trips, etc.

D. Farmington River Regional School District maintains an up-to-date website that keep parents and staff up-to-date.

E. The district complies with federal and state law[8], and local policies for archiving electronic communications produced by its staff and students. The district informs staff and students that any information distributed over the district or school network may be a public record. Farmington River Regional School District archives email on a daily basis. Every staff member and student is required to sign an Acceptable Use Policy that informs them that anything on school computers is considered public record.

Benchmark 6
Safety, Security, and Data Retention

A. The district has a CIPA-compliant Acceptable Use Policy (AUP) regarding Internet and network use. The policy is updated as needed to help ensure safe and ethical use of resources by teachers and students. The FRRSD AUP is posted on our website and all staff members and students must agree to abide by its terms before they are allowed to access the internet, email or build web pages. The AUP is also included in the Staff and student handbooks. Students are expected to abide by its terms or lose their Internet privileges.

B. The district educates teachers and students about appropriate online behavior. Topics include cyber bullying, potential risks related to social networking sites and chat rooms, and strategies for dealing with these issues. The District Attorney's Office provides additional training and classes to staff and students.

C. The district has a plan to protect the security and confidentiality of personal information of its student and staff. All confidential information is protected by controlling access to that information on a need to know basis. Internal access to the information is controlled by assigning network permissions to a user account. External access to FRRSD is blocked by a firewall. The firewall also provides content filtering. All paper files of personal information are kept locked in cabinets.

B. The district complies with federal and state law, and local polices for archiving electronic communications produced by its staff and students. The district informs staff and students that any information distributed over the district or school network may be a public record.

[7] The Department defines a high-capacity computer as a computer that has at least 2Ghz single processor or better, 1 Ghz dual processor or better and 1 Gb of RAM or better. The Department also refers to these as Type A computers.

[3] The Technology Self-Assessment Tool is available as an interactive tool on MassONE, as well as a printable PDF checklist (http://www.doe.mass.edu/edtech/standards/sa_tool.html).

[4] High quality professional development is described in the Massachusetts 2001 State Plan for Professional Development (http://www.doe.mass.edu/pd/stateplan/).

[5] Details are available on the Department's web site (http://www.doe.mass.edu/edtech/standards/sa_tool.html).

[6] A sample administrator technology self assessment tool is available on the Department's web site (http://www.doe.mass.edu/edtech/standards/tsat_sampadmin.html). The Technology Self-Assessment Tool (TSAT) for teachers is also available as a printable document and as an interactive tool on MassONE (http://www.doe.mass.edu/edtech/standards/sa_tool.html).

[8] Information about state regulations is available from the state's Record Management Unit (http://www.sec.state.ma.us/arc/arcrmu/rmuidx.htm).