

Madrid-Waddington Central School District Technology Plan

2018-2021



Approved by the Board of Education
October, 2017; August, 2018

A. LEA Information

1. Enrollment:

- 2015-2016 Enrollment: 690
- 2016-2017 Enrollment: 687 (10/07/16)
- 2017-2018 Enrollment: 702 (11/01/17)

B. Instructional Technology Vision and Goals

1. Mission Statement: The Madrid-Waddington Central School District, in partnership with home and community, within a safe environment of empathy, compassion, and respect, commits to maximizing each student's achievement in all domains regardless of learning style or ability.

2. Executive summary of the instructional technology plan, including vision and goals: Madrid-Waddington Central School, with the intent to allow all students to meet or exceed standards, will: Develop collaborative and communicative skills, Prepare students for productive employment and lifelong learning, Accept the responsibility to set and monitor attainable goals for staff and students.

The Madrid-Waddington Central School Technology Committee is proud that the status of the District Educational Technology currently aligns with the views of the New York State Board of Regents goals for career and college readiness. Madrid-Waddington will continue to strive to meet these goals as well as to update and upgrade the effective instructional utilization of technology integrated into the Next Generation Standards as time, efforts and finances allow. The District has made a commitment to administering 3-8 State Assessments in both ELA and Math via computer-based platforms; as well as preparing students for computer-based NYS Regents Exams. The District participates in Model School professional development activities in addition to a full-time District position of Instructional Support Specialist to support technology utilization in the classroom by teachers, students and support staff.

To ensure the safety of our students, the District has committed to investing in a new, integrated security/safety notification system. This will include a public announcement system, integrated phone messaging and alert system, as well as integrated security cameras throughout the interior of the building. Along with robust servers and higher capacity switches and access points, the District will be able to support the enhanced safety and security of its students.

3. Planning process used to develop the instructional technology plan.

The planning process for the Madrid-Waddington instructional technology plan included members of the following stakeholder groups: Elementary and Secondary Teachers; administrators; Library-Media Specialists; District Computer Technicians, community/parent representatives, school board member as well as BOCES and NERIC staff. State guidelines, the results of a formal faculty needs assessment survey, and technology committee

member input were used to formulate the plan. The outcome of the development meetings was a series of District needs and their accompanying goals. The goals focused on technology literacy for students and faculty, the effective use of technology as an instructional tool, maintaining current software and hardware, as well as researching and reviewing developing technology for possible future District implementation. The technology committee met on 10/07/16, 12/15/16, 12/20/16, 02/09/17, 02/17/17, 05/11/17, 06/08/17 during the 2016-2017 school year; and 09/13/17, 09/18/17 of the 2017-2018 school year to plan, implement, and evaluate the technology programs at Madrid-Waddington Central School. The committee also reviewed the current integration of technology in classrooms responding to teachers' and students' needs and requests.

4. Gaps between the current level of technology and the district's stated vision and goals:
 - Access Points
 - Cabling
 - Connectivity
 - Device Gap
 - Network
 - Staffing

5. The top three reasons causing the gap:
 - Connectivity/Access Points/Cabling/Network:
 - Financial limitations within the District for updating all switches to 10 gigabit each; APs that are wave two standards, CAT 6a cabling that will support the access points, cameras, phones, PA speakers, & switches; directional antennas for outdoor wireless coverage; licensing for zoned messaging on supported devices.
 - Device Gap: PA speakers, updated messaging-capable telephones, higher capacity interior and exterior access points, additional server capacity to support new technology upgrades.

The above gaps are due to the fact the District financial resources have focused on student and teacher resources to increase achievement and do not fall into our current annual technology budget.

C. Technology and Infrastructure Inventory

1. Capacity of telecommunications line coming into the district network hub:
 - 1Gbps - < 10Gbps

2. The total contracted Internet bandwidth access for the district:
 - 100 Mbps - < 1 Gbps

3. The name of the agency or from which the district purchases its primary internet access bandwidth:
 - NERIC
4. The capacity of the telecommunications line coming into the district's school building from the district hub:
 - Minimum capacity: 1 Gbps - < 10 Gbps
 - Maximum capacity: Greater than 10 Gbps
5. The circuit speeds at which the classrooms in the district are connected to the school building wiring/network closet:
 - Minimum capacity: 1 Gbps - < 10 Gbps
 - Maximum capacity: Greater than 10 Gbps
6. The port speeds of the switches that are less than five years old in use:
 - Minimum capacity of port speed of switches: 1 Gbps
 - Maximum capacity of port speed of switches: 10 Gbps
7. Percentage of the district's wireless protocols that are less than 202.11g: 1%
8. Wireless coverage:
 - We do have wireless access points in the district
 - 100% of instructional space has wireless coverage
9. The district DOES use a wireless controller in the district

10. Computing devices less than five years old in the district:

| | Number of devices in use that are less than 5 years old | How many of these devices are connected to the LAN |
|---|---|--|
| Desktop computers/Virtual Machines | 134 | 134 |
| Laptops/Virtual Machines | 35 | 5 |
| Chromebooks | 484 | 0 |
| Tablets less than nine (9) inches with access to an external keyboard | 0 | 0 |
| Tablets nine (9) inches or greater with access to an external keyboard | 0 | 0 |
| Tablets less than nine (9) inches without access to an external keyboard | 33 | 0 |
| Tablets nine (9) inches or greater without access to an external keyboard | 40 | 0 |
| Totals | 726 | 139 |

11. Percentage of students with disabilities in the school district, as of the submission date of this technology plan (10/17), have assistive technology documented on their Individual Education Plan (IEP): 1%

12. Additional assistance or resources, if provided, would enhance the district’s ability to improve access to technologies for students with disabilities:

- Funding for specialized professional development for teachers and IT staff in order to make full use of available assistive technologies that are identified on current and future IEP’s.
- The district seeks up to date, timely information regarding assistive technologies as they become available to better serve district students’ needs

13. Peripheral devices in use at the district:

| | Number of devices in use |
|-------------------------|--------------------------|
| Document Cameras | 10 |
| Flat Panel Displays | 4 |
| Interactive Projectors | 0 |
| Interactive Whiteboards | 65 |
| Multi-function Printers | 9 |
| Projectors | 5 |
| Scanners | 8 |
| Other Peripherals | 9 |
| Totals: | 110 |

14. Other peripherals in use at the district:

- 1 banner printer
- 8 web cameras

15. The district has an asset inventory tagging system for district-owned equipment

16. The district does allow students to bring their own devices (BYOD).

- On the average school day, there are approximately 350 student devices that access the district’s network.

17. The school providing for the loan of instructional computer hardware to students legally attending nonpublic schools pursuant to Education Law, section 754, is not applicable.

18. The district does not foresee any barriers that may prevent the district from testing 100% of its grade 3-8 students and NYSAA students students on computers by the year 2020

D. Software and IT Support

1. The operating system(s) in use in the district are

| | Is this system in use? |
|-----------------------------|------------------------------|
| Mac OS Version 9 or earlier | No |
| Mac OS 10 or later | Yes |
| Windows XP | No |
| Windows 7.0 | Yes |
| Windows 8.0 or greater | Yes |
| Apple iOS 7 or greater | Yes |
| Chrome OS | Yes |
| Android | Yes |
| Other | Yes - Raspbian and Ubuntu |

2. The name of the operating system included in “Other” are Raspbian, Ubuntu

3. The web browsers, both available and supported, for use in the district are

| | Web Browsers available and supported for use |
|--------------------------------|--|
| Internet Explorer 7 | No |
| Internet Explorer 8 | No |
| Internet Explorer 9 or greater | Yes |
| Mozilla Firefox | Yes |
| Google Chrome | Yes |
| Safari (Apple) | Yes |
| Other | No |

4. The district also uses a Learning Management System (LMS), a software application for the administration, documentation, tracking, reporting, and delivery of online and blended learning courses. The name of the Learning Management System (LMS) most commonly used in the district are: Odysseyware and Google Classroom

5. The five most commonly used software programs that support classroom instruction in the district are: ActivInspire, EasiNote/Snowflake, Nearpod, Reading Eggs.

6. The names of the five most frequently used research databases are: GALE Virtual Reference Library

7. The District also has a Parent Portal that accounts for:
 - Attendance
 - Homework
 - Student Schedules
 - Grade Reporting
 - Discipline Referrals and outcomes
 - NY State grade 3-8 State Assessment and NYS Regents outcomes
 - IEPs
 - RTI Reports

8. Additional technology-based strategies and tools, besides the Parent Portal, used by the District to increase parent involvement are:
 - Learning Management System
 - Emergency Broadcast System
 - Website
 - Facebook
 - Email
 - YouTube Channel
 - Class DoJo
 - Instagram

9. Full Time Equivalent (FTE) Staff whose primary responsibility at the District to provide technical support (not including instructional technology integration) are:

| Title | Number of Current FTEs |
|----------------------------------|------------------------|
| MicroComputer Systems Technician | 2.00 |
| Instructional Support Specialist | 1.0 |
| Network Systems Technician | 0.40 |
| Sr. Network System Technician | 0.20 |
| | 3.20 Total |

E. Curriculum and Instruction

1. The Madrid-Waddington District plans to continue to support enhanced educational opportunities through blended learning environments such as flipped classrooms, distance learning labs, fully online courses, and virtual reality-based curriculum experiences. The district is committed to supporting “BYOD” instruction, the district will ensure all students have access to a device at any point during the school day. To maintain

the safety and security of our students, as well as provide the most robust wireless connections, the district plans to update all switches to 10 gigabits, integrate message-capable phones, update paging endpoints, update security cameras, interior and exterior access points, and expand server capacity. All of these updates will ensure the wellbeing of our teachers and students by providing a safe and secure learning environment.

2. **Students with Disabilities:** the needs of these students will be addressed ensuring equitable access to instruction, materials, and assessments by providing Special Education teachers and assistants access to Reading A-Z, Read Naturally Live, Nearpod, Reading Eggs, Learning Ally, Accelerated Reader, ActivInspire, EasiNote, Snowflake, Google Apps for Education, virtual reality-based software, etc. Students have access to iPads, Chromebooks, Kindles, and desktop computer stations in Resource Rooms. Software applications are available in audio playback for these devices.
3. **Assistive Technology:** Each year, the goal of the Special Education Department is to build on existing technology while at the same time, provide new assistive technological opportunities for our students with special needs. The purchase of equipment and support are based on the current needs of each individual student at the time needed. The district has funded and implemented interactive touchscreens in each classroom. Assistive programs provided for the Special Education program include Google Apps for Education, Read Live, Read Naturally, Flocabulary, Learning Ally, NearPod, and Reading Eggs, and virtual reality-based programs, just to name a few. These programs are available on Chromebooks, iPads, and computers. All Chrome devices purchased after July 7, 2017 will be touchscreen to accommodate various learning styles. The education of staff and students in these programs is paramount for effectiveness, and Professional Development in this area is supported.
4. **English Language Learners:** All instructional and assessment materials will be able to be translated or have native language resources readily available. The district utilizes multiple web-based programs that have differentiated and specific lessons for English Language Learners such as Nearpod, Renaissance Learning, and Castle Learning. The district's ability to provide interactive devices such as Chromebooks, iPads, and Cleartouch panels will assist ELL students with individualized lessons.

F. Professional Development

1. This plan covers July 2018 through June 2020. Topics of Professional Development training offered to all instructional staff within the District will continue annually to include: Google Apps such as Gmail, Docs, Classroom, Hangouts, Slides, Sheets, YouTube, Sites, forms, extensions, add-ons, etc for all new staff. Clear Touch Interactive Panel training, including application of software programs such as EasiNote & Snowflake, will

continue for classroom instruction. New teacher training will include programs such as instruction on how to use zoned messaging, VOIP phones, Schooltool, IEP/RTI Direct, and other district-purchased programs, Professional Development Technology, training will occur on Staff Development Days, summer training sessions, as well as before, during, and after school. Our staff members will also attend Model Schools workshops, and other regionally offered training (through NYSCATE, Google, ISTE, etc.) Assistive Technology PD will be provided as necessary. All workshops are tracked via MyLearningPlan.

The audience includes all instructional teachers and teaching assistance, as well as support staff. Methods of delivery will consist of webinars, digital-based learning, video tutorials, classroom embedded instruction and coaching, large group instruction, peer teaching, and 1:1 teaching assistants.

2. Staff Responsible for Delivery Technology Integration Training and Support for Teachers
 - Instructional Support Staff = 1(FTE)

G. Technology Investment Plan

| Top Five Planned Instructional Technology Investments | | | | |
|--|--|----------------|------------------------------------|--------------------------|
| <i>(Over the next three years)</i> | | | | |
| | Anticipated Item or Service | Estimated Cost | Is Cost One-time, Annual, or Both? | Funding Source(s) |
| 1. | VOIP (New Phones and Public Announcement Systems) | \$170,000 | Both | ● Smart Schools Bond Act |
| 2. | Other (Security Cameras) | \$90,000 | One Time | ● Smart Schools Bond Act |
| 3. | Servers | \$20,000 | One Time | ● Smart Schools Bond Act |
| 4. | Switches | \$25,000 | Both | ● Smart Schools Bond Act |
| 5. | Wi-Fi | \$18,000 | One Time | ● Smart Schools Bond Act |
| | Total | \$323,000 | | |

In item number 2: “Other” we are referring to security cameras. Continued installation of high-tech security features, providing enhanced access control and continued improvement of surveillance camera system, integrating with the public announcement and VOIP silent messaging system.

H. Status of Technology Initiatives and Community Connectivity

1. Recent developments that affect the current status of the technology initiatives:

- Changes in Staffing
- Changes in Funding
- Technology Plan Implementation
- Computer-based Testing
- Developments in Technology

2. The District plan to increase student and teacher access to technology both at home and in the community:

Maintaining wireless controller & update wireless APs. Increasing number of updated school-owned mobile devices such as iPads, Chromebooks, Chromeboxes, and tablets. We will instruct our students on how to leverage their own personal devices as educational tools. A certain percentage of District devices will be available from the Media Center for students to borrow. We will also continue discussions with local internet providers in an effort to expand coverage for District homes and community. The option of district-managed hotspots to provide secure access to staff and students when not on District property continues to be an open discussion. Additionally, the District is researching the feasibility and need of wifi installation on school transportation vehicles. Computers with internet access will be available for community use after school hours. Public, content-filtered wifi available on school property to all visitors during non-instructional hours.

3. Locations where Internet service is available to students

Within the school district's geographical boundaries:

- Home
- Community

Within the community:

- Public Town libraries in Waddington and Madrid
- Bakery in Madrid

I. Instructional Technology Plan Implementation

1. MWCS Action Plan Goals:

- Provide students with state-of-the-art technology tools that will enable them to not only reach and surpass curricular goals for career readiness but to also stay abreast of the evolving use of technology in the world beyond Madrid-Waddington.
- Update and upgrade the effective instructional utilization of technology integrated into the Next Generation Standards as time, efforts, and finances allow.
- To ensure the safety of our students, the District has committed to investing in a new, integrated security/safety notification system. This will include a

public announcement system, integrated phone messaging and alert system, as well as integrated security cameras throughout the interior of the building. Along with robust servers and higher capacity switches and access points, the District will be able to support the enhanced safety and security of its students.

2. Timeline and Major Milestones for the implementation of the technology plan as well as the action plan to integrate technology into curriculum and instruction to improve student learning.

■ 2017-2018 Desired Outcomes:

- Purchase 5 Mobile carts (150 touchscreen Chromebooks)
- Replacement of 25 Teacher Computer Stations
- Purchase of 3-D Printer, software, supplies, and curriculum development
- Purchase 2 Virtual Reality systems, curriculum (software), & training
- Increased Instructional support staff capabilities
- Replace bus monitoring software/hardware as needed (Angel Trax)
- Purchase 12 LEGO Robotics kits and Virtual Simulation/supplemental courseware for TECH 8/STEM
- Smart School Investment Plan:
 - Install 2 new servers
 - 5 network switches
 - 6 outdoor access points
 - 135 zoned-messaging VOIP phones
 - Security Camera system upgrade
 - New VOIP Public Announcement system with paging endpoints
- Complete a Needs Assessment whereby the staff expresses their technology needs
 - Needs Assessment:
 - <https://goo.gl/forms/UFoWfbEVqn8OwRHD3>
 - Results from Needs Assessment:
 - https://docs.google.com/a/mwcsk12.org/spreadsheets/d/1rMzplM_HSGkQRjskU7McqvpaokKayRC2MqFD2TxN-2o/edit?usp=sharing
- Complete an action plan to meet the technology needs of the staff for 2018-2020

■ 2018-2019 Desired Outcomes:

- Purchase 150 Chromebooks and 4 carts
- Replace 35 teacher stations
- Replace 8 admin computer stations
- Replace business lab computers
- Purchase 10 laptops for LEGO Robotics

- *Pending SSIP approval, 2 switches, possibly purchase with District funds
 - Instructional Software purchases, as needed
 - Additional Professional Development, as needed
 - Robotic Curriculum:
 - K-4: Dash robots/early coding skills
 - Code Monkey
 - Turtle Art
 - 5-8: Cue Robots, 8th Grade coding class with Codesters, 8th Grade LEGO Robotics class.
- 2019-2020 Desired Outcomes:
 - Replace 150 Chromebooks
 - Replace elementary computer lab computers
 - Replace Mac Lab
 - Replace any computer lab that was not replaced in 2018-2019 (due to server/cost of other priorities)
 - Replace 8 admin computer stations
 - Instructional Software purchases, as needed
 - Additional Professional Development, as needed
 - 2020-2021 Desired Outcomes:
 - Update wireless access points and all related wiring
 - Replace 150 Chromebooks
 - Replace 35 teacher stations
 - Replace 12 Administration stations
 - Replace business lab computers
 - Continued robotic support
 - Continued Art department support
 - New servers, as needed
 - New switches, as needed
 - Complete an action plan to meet the technology needs of the staff for 2018-2020
 - Professional Development, as needed
 - Instructional Software purchases, as needed

J. Monitoring and Evaluation

1. The Technology Committee will meet at least four times per year at which time they will discuss current implementations, instructional services, device status and usage, as well as future plans for technology within the District as relative to the current Technology Plan. The committee includes stakeholders from instructional staff, administration, community member/parent, NERIC personnel, as well as a BOE member.

| Meeting Date | Actions | Desired Outcomes |
|--------------|--|---|
| Sept 2017 | -set yearly goals -begin revision of technology plan -react to feedback from teachers and instructional staff | -plan for year |
| Oct/Nov 2017 | -Committee will review use of current instructional devices, frequency of use, and grade level/ content area -continued revision process of technology plan | -adjust utilization and share information with faculty |
| Jan/Feb 2017 | -Design survey for staff to evaluate progress | -100% staff completion of Needs Assessment Technology Survey -Creation of a plan to be followed for the next academic year |
| Apr/May 2017 | -create a plan/lifecycle for technology for the following year | -Staff Survey for Technology PD for summer 2018 |

2. MWCS Technology Related Policies

| Policy | URL | Year Adopted |
|---|---|-----------------------|
| Acceptable Use Policy--AUP | https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDozNzE1MWQ0YzhjN2UwMzdk | 2015 |
| Internet Safety/ Cyberbullying* | https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDo2M2MzZGE3NzllNTgwODE | 2011 (Policy 8271) |
| Parents' Bill of Rights for Data Privacy and Security | https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDo0ZGFiZjBjMjZlY2NkYWUw | 2015 |

Role of the Technology Committee

- Communications to staff regarding District technology
- Provision of input to District administration regarding technology
- Assistance with long-range technology planning
- Direction and facilitation of staff technology requests

2017-2018 Technology Committee Members

- Andrew Anderson - NERIC Senior Network Administrator
- Joe Binion - HS Principal
- Eric Burke - Superintendent
- Michelle Burke - Instructional Technology Specialist
- Matthew Daley - Elementary Principal
- Laura Finnegan - Elementary Teacher
- William Gotsch - Elementary Teacher
- Charlie Graves - NERIC Technician
- Danielle Maclin - Middle School Teacher
- Kevin Marcinko - Technology Teaching Assistant
- Robert McGreevy - Instructional Technology Assistant and District Webmaster
- Sandra Ruddy - HS Social Studies Teacher
- Ted Schulz - HS Special Education Teacher
- Jordan Walker - Board of Education Representative

MWCS Technology Policies

The following Regulations, Policies and Procedures have been adopted by the Madrid-Waddington Central School Board of Education are available for inspection upon request at the District Office and on the District website:

<https://sites.google.com/a/mwcsk12.org/home/board-of-ed/district-policy-manual>

| Type | Number | Subject |
|--------|--------|---|
| Policy | 3160 | School District Standards and Guidelines for Web Page Publishing https://drive.google.com/viewerng/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDozNGO4ZjA1NzkwNTU2MWI5 |
| Policy | 3320 | Confidentiality of Computerized Information https://drive.google.com/viewerng/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDovYzQvNDYzMiViNGRIY2Y0 |
| Policy | 5671 | Information Security Breach and Notification https://drive.google.com/viewerng/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDozOCFJMmFwMWUwYzUzN2I5 |
| Policy | 6470 | Staff Use of Computerized Information Resources https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDovMGMwNTZIYTFmNGQxNGQz |
| | | Parents Bill of Rights for Data Privacy and Security https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDovZjlmOWJlNTZiYmI3ZGEw |
| Policy | 6471 | Social Networking Sites (SNS) Guideline https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDozM2NkYmJlM2I0ZTZkMmMz |
| Policy | 6480 | Use of District Cell Phones https://drive.google.com/viewerng/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDoxYzliMTHIY2Y5N2RlZTQ5 |
| Policy | 6490 | Use of Email in the School District https://drive.google.com/viewerng/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDpjMGFjMzFmYTIiNiE4YzQ |
| Policy | 7314 | Student Use of Computerized Information Resources https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDoxODkxNzdmYjQ5Nzk4YTFm |
| Policy | 7551 | Dignity for All Students Act https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDoxMTEvODlmZTZmMzM3NzQ3 |
| Policy | 8270 | Instructional Technology https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDo4ODUzYmJkOTM1NTBmZjg |
| Policy | 8271 | Children's Internet Protection Act: Internet Content Filtering/Safety Policy: https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDo2M2MzZGE3NzllNTgwODE Student Acceptable Use Policy: https://docs.google.com/a/mwcsk12.org/viewer?a=v&pid=sites&srcid=bXdjc2sxMi5vcmd8aG9tZXxneDo3ZTMwOTI3ZTJmM2FmNiY |