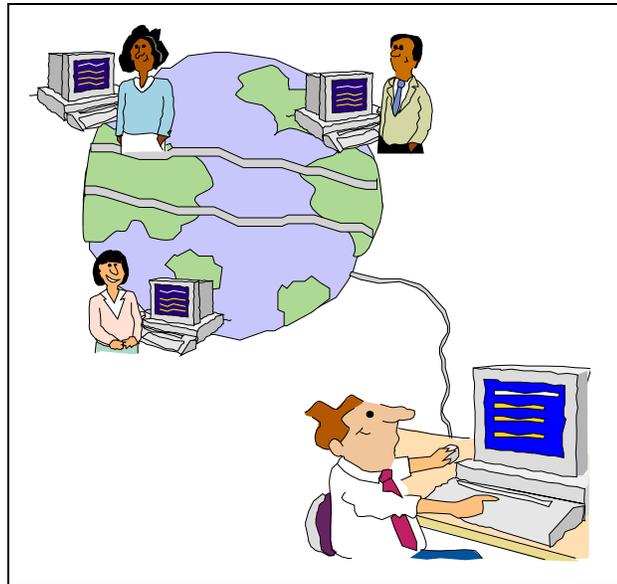# MILLBROOK CENTRAL SCHOOL DISTRICT

2016-2019 TECHNOLOGY PLAN

Millbrook Central School District
PO Box AA
Millbrook, New York 12545
www.millbrookcsd.org

Contact: Diane Morey, Technology Director
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Plan URL: www.millbrookcsd.org/technology

Board of Education Approval Date:

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Board of Education Members
Perry Hartswick, President
John Rudy, Vice President
(listed alphabetically)
Claudia Heunis
Deirdre Houston
Thomas Lehmkuhl
Howard Shapiro
Paul Tobin

Administration

Administrator	Title
Philip D. D'Angelo, Jr.	Superintendent of Schools
Caroline Hernandez Pidala	Assistant Superintendent for Curriculum, Instruction & PPS
Brian Fried	Assistant Superintendent for Business, Operations & Finance
Eric Seipp	Millbrook High School Principal
Steven Cabello	Millbrook Middle School Principal
Thomas Libka	Alden Place Elementary School Principal
Karen Ferguson	Elm Drive Elementary School Principal

District Technology Committee

Member	Title/Position	Building	Parent in District
Philip D. D'Angelo, Jr.	Superintendent of Schools	District Office	No
Caroline Hernandez Pidala	Assistant Superintendent	District Office	No
Brian Fried	Assistant Superintendent	District Office	Yes
Eric Seipp	Principal	High School	No
Steven Cabello	Principal	Middle School	No
Thomas Libka	Principal	Alden Place	No
Karen Ferguson	Principal	Elm Drive	No
John Ahern	Teacher	Middle School	No
Leslie Anson	Teacher	Middle School	No
Jillian Barnes	Teacher	Middle School	No
Alicia Dorsman	Teacher	Elm Drive	No
Jessica Gilmour	Teacher	Middle/High	Yes
Kelly Gruntler	Teacher	Alden Place	Yes
Dawn Harkenrider	Teacher	Middle School	Yes
Charlene Hartley	Support Staff	Alden Place	Yes
Erin Hicks	Teacher	Middle School	No
Sean MacLarion	Microcomputer Software Ass't.	Central Office	No
Diane Morey	Technology Director	Central Office	No
Cathie Morton	Library/Media Specialist	Middle/High	No
TBN	Support Staff	Middle/High	No
Jessica Quint	Teacher	Alden Place	No
TBN	Support Staff	Central Office	Yes
Sean Shock	Ass't. Technology Director	Central Office	No

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Sarah Sullivan	Library/Media Specialist	Alden/Elm	No
TBN	Teacher	Alden/Middle	No
William Yager	Teacher	Middle School	Yes

The District Technology Committee was charged with the tasks listed below:

1. Gather and analyze broad based data regarding the District's current technology problems, needs, and status, including an inventory.

2. Develop strategies and solutions that are necessary to address the District's needs and problems and to fulfill the District's technology mission.

3. Determine what hardware and software are best suited to implement the strategies and solutions.

4. Develop an implementation process which includes a cost analysis, a recommended series of steps or phases for implementation (including a time line), and a recommendation for the staff training that will be necessary.

5. Develop a means to measure the success of the plan.

6. Explore possible alternative methods of funding.

7. Present the long range technology plan to the Board of Education at a public meeting (May 17th, 2016).

Millbrook Central School District Demographic Profile

The Millbrook Central School District is located in the geographical center of Dutchess County. It has an area of 80 square miles in a rural/suburban setting. The district is comprised of 958 students who are housed in four buildings: Elm Drive Elementary School (K-2), Alden Place Elementary School (3-5), Millbrook Middle School (6-8) & Millbrook High School (9-12).

District-Wide Information (numbers)	
Administrators	8
Teachers	104
Support Staff	70
Students	958
Ethnic Statistics – Students (percentage)	
Black	2.0%
Asian or Pacific Islander	0.8%
Hispanic	10.0%
White	85.0%
Multiple Races	2.2%

School Enrollment (numbers - approximate)		
Millbrook High School	Students (Grade 9-12)	320
Millbrook Middle School	Students (Grade 6-8)	242
Alden Place Elementary	Students (Grade 3-5)	211
Elm Drive Elementary	Students (Grade K-2)	184

Annual Budget for 2017-2018	$28,922.989

<div align="center">**District Mission Statement**</div>

"It is our mission to prepare our students to deal effectively with the challenge of an ever changing society, and to guide them in becoming humane critical thinkers, decision makers and problem solvers."

<div align="center">**District Technology Goals**</div>

1. **Emphasize the Culture of Learning**
    Continue to partner with faculty, staff, administrators, and parents to enhance the culture of learning whereby students are urged to strive toward greater achievement and higher education goals.
    To achieve these purposes, the district will:
    - Promote school-based plans which develop a culture of both high expectations for individual learning and a personalized learning environment for students
    - Align K – 12 curriculum and correlate it to student achievement expectations/benchmarks
    - Review district programs resulting in annual recommendations for improvement, revision and/or elimination
    - Provide ongoing K – 12 Professional Development which develops staff capacity to collaborate effectively in meeting the challenge of improving student achievement in relation to state mandates.
    - Continue to evolve faculty integration of technology with staff training at each school.
    - Implement instructional intervention support systems
    - Support high school, middle level and elementary program development
    - Provide for ongoing and annual assessment of student achievement
    - Continue to develop technology infrastructure in order to support the Technology Plan.
2. **Fiscal Planning and Management**
    Develop plans and policies which will enable the district to be fiscally prudent while continuing to invest wisely toward achieving educational excellence.
    To achieve these purposes, the district will:
    - Seek alternate funding (grants) to augment support for program improvement and professional development
    - Investigate collaborative multi-district or inter-municipal service and purchasing programs and incorporate where prudent
    - Update the district's comprehensive multi-year budget for K-12 technology systems

<div align="center">**District Technology Vision Statement**</div>

Provide every student with access to a full range of educational technology tools to develop higher-order thinking skills (problem solving, critical and creative thinking, decision making).

Identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and standards-based curriculum leading to high levels of student achievement.

Purchase appropriate technologies to support the following instructional strategies:
- Incorporation of real-life applications and career standards
- Encouragement of exploration and discovery learning methods
- Engagement of students in project-oriented, student-centered learning.

Provide on-going, technology-based, interactive learning opportunities for students, teachers, and administrators that can be accessed anytime and anywhere.

Encourage strategies for instructional delivery that routinely utilize available and emerging technology.

2013-2016 Technology Plan Accomplished Goals

The Millbrook Central School District has implemented the following technological enhancements and changes during the past three (3) years:

- A multi-year plan was completed that will significantly enhance our K-12 academic program. New computer labs were purchased to support our Art and general education programs. Mobile laptop carts were purchased for classroom use by students in grades 7-12 for their Social Studies and ELA classes, and for general use by students in grades 3-5. Mobile tablet carts were purchased for grades K-2 to support special education and MST.
- Project Lead The Way (PLTW) program offerings were expanded to include a high school Digital Electronics elective.
- Chromebook carts were purchased with grant funding for Alden Place to support our special education students as well as our academic intervention programs.
- Google Classroom was launched for teachers in grades 3-12.
- Electronic student portfolios were created for students at Elm Drive and Alden Place.
- Google Sites is now being supported as an alternative to Moodle for teacher web pages.
- Replacement computers were purchased for the oldest desktops and laptops.
- NYS testing and reporting requirements are now supported through the use of StaffTrac, DataMate, Scholastic SRI, and AIMSweb software.
- Middle School 7th grade students participated in the Spring computer based field test for the NYS Math exam.
- DataMate Live was purchased for teachers to create their own online tests.
- EdVistas Dashboard was purchased to support administrators, counselors, and teachers by providing custom data views for data driven decision making.
- The District moved from AlertNow to the SchoolMessenger system for parent communication, which allowed us several new delivery options.
- Minor changes were made to the District acceptable use policy for computer equipment and Internet use. Students in grades 6-12 will now be allowed limited access to email.

Improvements to infrastructure have provided for the support and expansion of program goals:

- Physical servers at end of life were replaced - District Offices, Zenworks imaging, and M86 web filtering.
- Additional RAM was added to the Virtual Server system to support new servers at a lower cost per unit and with built-in hardware redundancy to minimize down time.
- Wireless capacity was increased to accommodate new mobile labs.
- District staff and teachers were moved to a new email system (Google Gmail) to replace an obsolete package (Novell GroupWise).
- A KACE Help Desk system was implemented to facilitate more efficient technology support and computer equipment inventory management.
- Core switch upgrades were completed at the Middle School to prepare for increased wireless capacity.
- The District firewall server was replaced with a newer model that will handle our increasing bandwidth requirements.
- Security cameras were added or upgraded at all district locations for enhanced security.

Curriculum and Instruction Objectives

District staff who have leadership roles will participate in and create opportunities for all students and staff to increase the understanding of technology necessary for life-long learning and success:
- Review and adopt ISTE NETS for teachers and administrators.
- Teachers will present successful uses of technology to grade level or building groups of their colleagues, in order to encourage and expand the use of these applications.

Integrate technology at all levels (K-12) in support of NYS Common Core Standards, and ISTE National Standards:
- Students will engage in teacher facilitated, technology-dependent learning that is project-based, using open-ended questions and higher order thinking skills.
- Faculty will complete curriculum mapping for all subject areas and grade levels, including a review of maps for vertical correlation with grade levels above and below.
- Review and re-align curriculum to the NYS common core standards.
- Document core technology skills for grades K-12 using curriculum mapping software.
- Create benchmarks/projects that will demonstrate students understanding of core technology skills integrated with classroom curriculum.
- Make a lesson plan repository available to all teachers.

Encourage strategies for instructional delivery that make use of emerging technology and 21st Century learning skills:
- Teachers will encourage students to select from a variety of technology tools to organize and to summarize material.
- Students will select appropriate tools and electronic devices to gather, organize, analyze, and present information.
- Students will communicate ideas through a variety of media and Web 2.0 tools, including video, images, and collaboration tools (for document, bookmark, and video sharing).
- Expand the use of interactive and collaborative software (online courses, wikis, video chat) as an opportunity for teachers to engage with students.
- Evaluate the "Flipped Classroom" approach: Expand capabilities for providing audio/video files as a tool for instruction (podcasts, video capture of class lessons/lectures, subscription video libraries).
- Develop electronic student portfolios to organize/display/archive student work.
- Encourage reading and publishing skills using tools like Shelfari, a virtual bookshelf where students can read books, publish summaries, assign ratings, give reviews, and share recommendations.
- Video sharing for large files

Utilize technology resources to differentiate instruction (i.e., to provide students with the appropriate remediation and/or enrichment to achieve individual academic excellence):
- Select and use appropriate software for staff to manage and monitor progress of students receiving AIS services and other remediation programs.
- Select and use appropriate software for student enrichment programs.
- Purchase assistive technology devices as needed to comply with individualized education program (IEP) requirements.

Acquire technology when required to implement instructional programs that enrich learning experiences:
- Continue and expand Project Lead The Way (PLTW) Program.
- Support the International Baccalaureate (IB) Program for 11th and 12th grade students.
- Keyboarding instruction beginning in grades 3-5
- Core/Basic Technology Skills instruction for grades K-5
- Evaluate and purchase appropriate tools to incorporate video production & broadcasting into student instruction.
- Information Literacy classes at appropriate grade levels, to instruct students on evaluation of electronic resources and selection of appropriate resources to solve authentic problems.
- "SWAT" (Students Who Assist w/Technology) teams of student leaders at each building:
  - Middle & High School students helping younger students
  - School Webpage Designers
  - TV/Weather Internet News Crew
  - Anti-Cyber Bullying

Communication Objectives

Improve communication between the District and our community to enhance the community's knowledge of our programs:
- Use the district website to allow teachers and administrators to build relationships with community members.
- Conduct surveys and polls to solicit community feedback.
- Offer parents the opportunity to access web-based information about their children's learning environment, climate, and outcomes, as well as a wide range of student activities that can help them to monitor and reinforce the instruction their child receives at school.
- Create website links for video on demand viewing of public presentations (speakers, concerts, plays, Board of Education meetings).
- Post all District printed materials (publications, presentations, letters to parents or community members) on the website.
- Expand the use of our SchoolMessenger phone notification system to include email and text messages to parents.
- Increase the type of information posted by teachers in the Schooltool Parent Portal.
- Explore feasibility of purchasing intercom systems that are integrated with our phone system as the old systems are phased out.
- Publish our district newsletter in-house, using podcasting, RSS feeds, video stream weekly news from administrators.
- Share district events, awards presented to students and staff, and other accomplishments with community members using the district website.

Electronic Resource Objectives

Increase the use of technology tools and digital content that allows learning to take place anytime, anywhere:
- Expand web-based opportunities for students and staff.
- Investigate a multimedia management system to replace our current separate systems (Ensemble video, videoconference bridge, & Adobe Connect)
- Increase virtual/online learning opportunities for students.
- Provide remote access to district resources for students and parents (including but not limited to the following: full text encyclopedia/print media subscription databases, education based search engines).
- Purchase online or digital textbooks whenever possible.
- Expand collection of e-books and readers to district library materials and services.

Public Library Collaboration Objectives

Increase use of the Millbrook Public Library and/or collaborate on projects:
- Elm Drive Elementary School students periodically visit the Millbrook Free Library (MFL), ranging anywhere from four visits per school year to monthly visits. The children's librarian does a literature-based program with the students, and students are then allowed to check out books.
- Middle School and High School Book Clubs receive their monthly selections through collaboration with the library staff and children's librarian.
- Library Media Specialists and public librarians collaborate on programming, including the annual 9th Grade Book Buffet in celebration of National Library Week.
- Library Media Specialists and public librarians work together to promote New York State's annual summer reading program, Teen Cafe, and other library sponsored events.
- Access to the Millbrook Central School District's library automation system is available from any computer with an Internet browser, including those at the Millbrook Free Library.
- The Millbrook Free Library is an MCSD courier stop, allowing for the inter-library loan of materials between the school district and public library.
- Our district participates in the Millbrook Literature Festival that takes place annually in May.

Internet Safety Objectives

The District, in compliance with Children's Internet Protection Act, strives to create a safe learning environment for all students in accordance with the following:

- Use of an Internet filtering system to block and filter Internet access by minors to inappropriate content.
- Providing instruction for students on safety and security measures to follow when using electronic mail, chat rooms, social media, and other forms of direct electronic communications
- Strategies to prevent unauthorized disclosure, use, and dissemination of personal information
- Monitoring of unauthorized access, including so-called "hacking", and other unlawful activities by minors online.
- Creating or adopting Internet Safety Programs for students and parents.
- Sponsor Computer Use and Internet Safety programs during school, and offer to the community whenever possible.

Community Outreach Goals

Evening Computer Courses for Senior Citizens: e-Books, Social Media, including video chats with family members, Online Shopping & Online Finance, Travel Planning, Health/Diet and other Internet research topics:

- Evening Computer Courses for Parents- Parent Portal, Internet Safety, Library Research databases, Seminars for Instructional Programs like Tenmarks, XtraMath, and new technologies like iPads.
- Have students research/interview business owners in the Millbrook community and publish video documentaries.
- Students and staff showcase technology in community areas and events like Parade of Lights, Merritt Bookstore Art Show, etc.

Professional Development Goals

Support and expand professional development for teachers by providing training that satisfies a range of technological competencies, and by the use of a wide variety of delivery methods:

- Professional Development will be provided through in-service courses and through participation in the BOCES Model Schools CoSer.
- Create additional programs and materials for faculty and staff training (before and/or after school, summer sessions).
- Provide mentoring opportunities during the day for teachers with high level technology skills to assist classroom teachers who want to use technology that is new to them. Faculty will offer introductory and intermediate knowledge in areas where they have developed expertise that will support the use of both hardware and software technology tools.
- Set up inter-building videoconference meetings to facilitate collaborative instructional projects that may involve a mentoring component.
- Introduce the 2008 (revised) ISTE NETS for teachers and administrators.
- Provide opportunities to bring in experts for higher level training.
- Include technology integration component in annual evaluation for teachers.

Note:
These goals were developed from District level PD surveys, from discussions with the District Technology Committee and in consultation with the Assistant Superintendent for Curriculum, Instruction & Special Education (Kathleen Affigne).

Non-Instructional Support Goals

Enhance the efficiency and effective use of administrative software (scheduling, grades, attendance, financial, Special Education, etc.).

- Software will be integrated, or processes created for transfer of data between systems whenever possible.
- Move to a "single sign on" where possible, for staff to access all of their password protected systems
- Computer orientation process for long term substitute teachers.
- Administrators will use management software to cull information for completion of state and federally mandated reports (e.g., BEDS, VADIR, Civil Rights Surveys) and any other report requiring demographic or assessment data.
- Staff will use a standard set of software tools for efficient sharing of information (e-mail, calendar, resource scheduler, word processing, spreadsheet, e-mail archive).
- Periodic review and update of district procedures and policies in order to maintain compliance with state/federal reporting and data retention requirements
- Review and revise *Responsible Use Policies* for student and staff use of computer equipment and the Internet.

School Safety Goals

Provide technology tools for ensuring the safety of our students and staff:

- Digital attendance records and bus rosters for use with fire drills, evacuation drills, and in the event of real emergencies.
- Safety/emergency related text message alerts for staff and parents.
- Upgrade security camera system- add exterior/interior cameras, update system for higher quality video.
- Improve administrator access to security camera video using web enabled software access
- Use a program to control door access at all buildings. Allow staff access as needed to implement evacuation drills to alternate buildings.
- Use a work order system to report, track, and manage health and safety issues handled by our maintenance staff.
- Internet Safety Curriculum for all students in grades K-12.

Note: These goals were developed in consultation with the Assistant Superintendent (Brian Fried), the Director of Facilities (Steven Tortorici), and from the findings/recommendations of the BCS.

Equipment, Software,Technical Support & Equitable Access Goals

Establish standards for hardware, software, and required technology skills (for students, teachers, administrators) as appropriate for district, building, and grade/department levels:

- Evaluate current hardware distribution and recommend purchases as needed to maintain equity and to ensure that planned program expansion will take place.
- Implement a 5-8 year replacement plan for all desktop and laptop computers.
- Make broad software recommendations and purchases based on curriculum requirements by grade level, building, and/or department, after identifying areas of need (including general purpose, remediation, enrichment, independent study).
- Purchase site licenses for reviewed/approved software when possible, to reduce installation and maintenance costs, and to ensure access for all students.

Monitor and upgrade network infrastructure, and ensure adequate levels of technical support as the demand increases:

- Respond to network growth needs with increased capacity (Internet bandwidth, internal network speeds including wireless and wired, video streaming requirements)
- Survey all rooms to make sure there is adequate power for using computer equipment and all other required electronic devices.
- Monitor and maintain hardware infrastructure (servers, switches, routers, and management devices) to provide adequate access to the network.
- Identify ways to increase technical support staffing levels in order to decrease down time of equipment, reduce wait time for teachers, and maximize use of the computer labs, libraries, and specialized equipment.

- Periodically upgrade server and workstation operating systems, security software, and other tools (MS-Office, anti-virus, plugins- Flash, Media Player, etc.) as needed to maintain a properly functioning infrastructure.
- Install and use software that will allow computer technicians to provide remote support (VNC, Windows RDP, Apple Remote Desktop), in order to reduce the manpower needed to support existing hardware and software.
- Purchase and install security devices (internal/external cameras, building code/card access systems, visitor management system).

Provide equitable access to, and distribution of, appropriate technology for the entire school district and community:
- Promote the installation and use of open source software.
- Pilot a one to one program (a laptop for each student) in7th or 10th grade
- Explore mobile technology use (smart phones, tablets)
- Open computer labs/libraries for student use after school. Students can do homework and access online textbooks.
- Research equipment discount programs available to parents and staff.
- Provide continuing education for parents (Parent University). Topics might include: Internet Safety, Avoiding Internet/Email Scams, basic word processing and spreadsheet skills.

Evaluation Strategies

Provide assessment tools that will give teachers and administrators the ability to use data to make decisions that will improve teaching and learning.
- All students will be given a Technology Proficiency Assessment during their 8th grade year, based on the ISTE NETS Standards for students.
- The district will make data/statistics available to teachers and administrators for use in assessing/revising programs, disaggregated by building, grade level, course, teacher, and/or student as needed.

State & Federal Requirements

Make sure all District use of technology complies with federal & state regulations:
- Evaluate tools that will assist with federal CRDC (civil rights data collection) reporting
- Comply with NYS reporting mandates for Special Education data using the PD system
- Expand the use of Finance Manager for required staff APPR data reporting (new areas are tenure, professional development, and staff absences)
- Support faculty use of the NYS TEACH system
- Assist teachers with verification of their BEDS data and their Student/Course linkage data ("TSRV"), possibly using period attendance reporting for K-5 to auto-compute minutes of attendance
- Introduce tools that will help our students prepare for the online NYS CBT assessments
- Student Assessments:
    o NYS computer based testing online, grades 3-12 beginning in 2016-17
    o Benchmark local assessments for determining individual student growth

Budget Information

Hardware:

The following budget is based on available funds in the BOCES lease code each year, and does not necessarily represent the total cost requirements of all of the desired and proposed new program purchases, replacement equipment, and infrastructure maintenance. Supplemental funds are considered annually to support the total desired and proposed plan on an as needed basis.

Infrastructure upgrades are often a large initial expense, and for that reason are strategically planned for a particular school year. Program purchases are deferred to the following year in order to maintain a level budget amount.

Replacement computers are purchased with available funds after program and infrastructure needs are met, because the first two are needed in order to support the computers. Historically, it has not been possible within existing budgets to replace units after 5 years and still fund new programs, so we have deferred replacement of some units in order to balance these needs. We have reviewed our total computer inventory, and along with making recommendations for an anticipated life span of somewhere between 5-8 years, we have established an actual cost for replacement of computers required for instruction and administrative areas (see Appendices A, B & C for details).

2016-2017:   **Total = $ 240,000**
             ($96,000 DC BOCES Lease + $144,000 E-rate Category 2)
             District wireless infrastructure upgrades = $217,000
             Elm/Alden wiring closet upgrades = $23,000
             District replacement computers = $ 0

2017-2018:   **Total = $424,000**
             ($100,000 DC BOCES Lease + $324,000 Smart Schools Bond Act)
             Elm Drive additional wireless capacity (20 classroom AP's) = $19,240
             Elm Drive additional wiring drops (20) = $7,575
             District Virtual Server (ESX Host) upgrades = $10,000
             Laptops for 10th grade 1:1 and IB programs = $75,000
             District replacement computers = $200,000
             District replacement of PA systems = $TBD

2018-2019:   **Total = $100,000**
             ($100,000 DC BOCES Lease + TBD)
             District door access and visitor management system = $TBD
             District replacement computers = $200,000

The District will participate in various BOCES CoSers. Membership in these CoSers allows for technology purchases in the area of infrastructure, hardware, software and staff development, with state aid reimbursement.

The District will continue to assess the option of hardware expenditures that would be eligible for partial reimbursement through NYS aid to public schools.

<div align="center">**Software**</div>

State Aided Expenditures = $22,500
This amount is reimbursed fully each year by NYS aid. These funds will support annual subscription fees for:
- $6,100 Project Lead The Way
- $2,000 OPALS Library Automation
- $2,000 Smart Notebook (District site license, based on 104 FTE Teachers)
- $7,500 NewsELA for MMS
- $2,500 Learning A-Z (Reading A-Z, Writing A-Z, Raz Kids) for Alden & Elm
- $2,400 Typing/keyboarding (Alden, MMS), Eduware (6-12 Science), SmartMusic (6-12), Spelling City (Grade 1), Dreambox (Grade 2), Movie Licensing (District), iTunes apps, Windows/Mac OS upgrades, MS-Office suite

Millbrook General Fund = $68,015
This additional amount is included in the General Fund budget, paid through a BOCES CoSer for BOCES aid where possible, and covers annual fees for:

<div align="center">**Instruction**</div>

 $4,000 = Naviance (MHS, MMS)
$10,000 = GradPoint (MHS, MMS)
 $3,500 = ELA/SS Web (Elm, Alden)
$12,500 = SuccessMaker Reading/Math (Grades 2-8)
 $1,100 = Vocabulary.com (MMS site license)
 $8,500 = Database Subscriptions (Britannica, ProQuest, BrainPOP, Discovery, PebbleGo)

<div align="center">**Testing**</div>

$3,500 = AIMSweb Reading/Math (Grades K-8)
$7,125 = Scholastic SRI Reading (Grades 3-12)

<div align="center">**District**</div>

$3,500 = AIMS (AIS/RTI Reporting)
  $995 = Curriculum Developer (curriculum maps)
$3,200 = StaffTrac (APPR reporting)
$1,600 = DataMate (view state assessments)
$1,495 = DataMate Live (create teacher/school based online tests)
$2,500 = Dashboard (customizable views of all student data)
$1,500 = Safe Schools (student discipline/VADIR incident reporting)
$2,000 = SchoolMessenger
$1,000 = AirWatch (mobile device management)

$ 90,515 = Total Instructional Software Annual Budget

Professional Development

Budget for this area varies depending on new program initiatives. Service is provided to faculty and staff through:

- Dutchess County BOCES Model Schools CoSer = $ 18,250/year
- Mid-Hudson Teacher Center (MHTC)
- After school sessions hosted by our teachers
- On-site vendor support for new program implementations

Use of state and local financial resources

The District will file an annual application through Dutchess County BOCES to take advantage of any discounts available through the federal E-Rate program.

The District will file an application through Dutchess County BOCES to secure NYS Smart Schools Bond Act (SSBA) funds, and develop a plan for eligible purchases.

The District will continue to work closely with the Millbrook Educational Foundation, an organization that has generously provided funds for many projects that are vital to our operation and contribute to the success of our students.

The District will explore additional opportunities to form community partnerships and secure grant funding or donations from businesses and organizations (NYS Senator Saland, Tribute Gardens, Dyson Foundation, IBM, Marist College, Cary Institute, and our PTO).

The District will research and apply for any grants, local, state, or federal, that might result in additional funding for the support of technology in education.

Summary - New Programs & Aspirational Goals

Equipment
- Upgrade wireless infrastructure- increase speed, expand coverage from 63 to 155 AP's
- Expand virtual server (ESX) system to handle additional servers
- Laptop/Chromebook carts for additional classrooms in grades 3-9
- Purchase digital textbooks where available, as requested
- Research a 1-1 (one laptop for each student) for 10th-12th grade students

Instruction: Courses
- Keyboarding instruction beginning in grades 3-5
- Core/Basic Technology Skills instruction for grades K-8
- Support as required for the High School International Baccalaureate (IB) Program

Instruction: Tools/Outcomes
- Apply to become a 'Digital Citizenship Certified District" (School Library Media Centers engage and empower 21st century students to think critically, behave safely, and participate responsibly online.)
- Media management tools to incorporate video production & broadcasting.
- Students publish video documentaries about businesses/attractions in the Millbrook area.
- MakerSpaces in libraries- work spaces where students can gather to create, invent, and learn using 3D printers, software, electronics, and crafts. Host "Genius Hour" sessions (where students explore their own passions, encouraging creativity in the classroom).
- "Flipped Classroom"- audio/video files as a tool for instruction (podcasts, video capture of class lessons/lectures, video libraries like Khan Academy, iTunes University).
- Electronic student portfolios to organize/display/archive student work.
- Online meetings for staff working in separate buildings.

Professional Development
- "Teachers teaching teachers" via peer mentoring
- Students teaching students- "SWAT" (Students Who Assist with Technology) Teams

Safety
- Add internal/external security cameras.
- Add visitor management system with ID badge reader (replacing key fob door access), driver's license lookup, RF location tracking on visitor badges
- Intercom/PA systems that are integrated with phones, coverage for hallways and non-classroom areas (bathrooms, boiler rooms, offices).

Administrative, State & Federal
- Move to a "single sign on" where possible, for staff to access all password protected systems
- Integrate all software systems to share data where possible
- Continue to develop local online assessments and technology benchmarks by grade level
- Preparation for online NYS CBT assessments

Community Outreach
- On demand viewing of public presentations (speakers, concerts, plays, Board of Education).

Assessment of Current Resources

Support Staff:
1.0 FTE Technology Coordinator
1.0 FTE Assistant Technology Coordinator
2.0 FTE Library/Media Specialist, Grades K-5 and Grades 6-12
TBD - Data Specialist

Current Course Offerings:
Grades K-5:   Core Technology Skills (required, content based on MCSD K-12 Core Technology Skills document)
Grades 3-5:   Keyboarding Skills (required course, weekly sessions)
Grades K-12: Internet Safety (required courses)
Grades 3-5:   Library Skills (required, once per month sessions)
Grade 6:   Digital Literacy (required, 10 week course)
Grade 6:   Graphic Arts (required, 10 week course)
Grades 6-8:   Social Studies (mobile cart in the classroom)
Grades 6-8:   GTT (required courses)
Grades 9-12: PLTW (elective courses)
Grades 9-12: English 9 & 11, Social Studies 10 & 12 (mobile cart in the classroom)
Grades 9-12: Graphic Arts (elective courses)
Grades 11-12: International Baccalaureate Programme

Staffing Recommendations

In order to support the increased use of technology and ensure that our instructional program aligns with the technology benchmarks by grade level, the District Technology Committee recommends reviewing the following staffing areas:
- Additional teacher support for K-5 core technology skills lessons
- Additional tech support staff for managing the increased number of devices and computer programs in use

Plan Development

The revised Technology Plan for 2016-19 was created by the District Technology Committee, comprised of teachers, administrators, support staff, and parents, along with input from the Board of Education and the Superintendent of Schools.

The District encourages community members to be part of the implementation of the plan, and the ongoing evaluation process. Parents, high school students (current and former), community members, and local business owners will be welcome to contribute through participation in Emerging Technologies groups, PTO activities, the Millbrook Educational Foundation, and other organizations. School newsletters, District newsletters, the Poughkeepsie Journal, and the Millbrook website will be used as tools for distributing information.

The District Technology Committee will meet periodically to review progress on the technology plan implementation and will revise/update the technology plan annually.