



**Kinnelon Public School District  
Long Range Technology Plan  
2017-2020**



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Ms. Madelaine Travaille  
*K-12 Supervisor of Science*

Ms. Denise Velez  
*K-12 Supervisor of English*

## **Kinnelon Board of Education Mission Statement**

The Kinnelon Public School District's mission is to empower students to utilize complex skills to pursue intellectual achievement, personal excellence and social responsibility, which will enable them to positively impact our changing global society.



**Kinnelon High School**

Mr. Gary Suda  
*Principal*

Mr. Scott Rosenberg  
*Assistant Principal/Athletic Director*

Mr. Vincent Shivas  
*Assistant Principal, Kinnelon*

**Pearl R. Miller Middle School**

Mr. Mark Mongon  
*Principal*

Ms. Alyson Lio  
*Assistant Principal*

**Stonybrook Elementary School**

Ms. Jodi Mulholland  
*Principal*

Ms. Noreen LaFergola  
*Assistant Principal*

**Kiel Elementary School**

Ms. Ivonne Ciresi  
*Principal*

**Kinnelon District Information Technology Staff**

Mr. Jay Jannicelli  
*Director*

Mr. Bill Moller  
*Network Technician*

Mr. Frantz Logerie  
*Network Technician*

## Stakeholder Table

<b>Title</b>	<b>Name</b>	<b>Location</b>	<b>Signature</b>
<b>Superintendent</b>	Ms. Diane DiGiuseppe	Central Office	
<b>Information Technology Director</b>	Mr. Jay Jannicelli	Central Office	
<b>Director of Curriculum and Instruction</b>	Dr. Thomas Tufaro	Central Office	
<b>School Administrator</b>	Mr. Gary Suda	Kinnelon High School	
<b>School Administrator</b>	Ms. Alyson Lio	Pearl. R. Miller Middle School	
<b>Supervisor of Mathematics</b>	Ms. Amelia Petrocelli	Central Office	
<b>Supervisor of Science</b>	Ms. Madelaine Travaille	Central Office	
<b>Teacher</b>	Mr. Matthew Arroyo	Kinnelon High School	
<b>Teacher</b>	Ms. Rebecca Baucom	Stonybrook Elementary School	
<b>Teacher</b>	Mr. Jonathan Cataldi	Kinnelon High School	
<b>Teacher</b>	Ms. Danielle Elia	Kinnelon High School	
<b>Teacher</b>	Ms. Leslie Horn	Kinnelon High School	
<b>Teacher</b>	Mr. John Manning	Pearl R. Miller Middle School	
<b>Teacher</b>	Ms. Hannah Sappio	Kinnelon High School	
<b>Teacher</b>	Ms. Michelle Sorce	Kiel Elementary School	
<b>Teacher</b>	Ms. Karen Stroczyński	Stonybrook Elementary School	
<b>Child Study Team</b>	Ms. Lori Drewes	Stonybrook Elementary School	
<b>Child Study Team</b>	Beverly Miller	Kiel Elementary School	
<b>Parent</b>	Ms. Nancy Bosch	Kinnelon High School	

## Current District Infrastructure

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### *External Connections*

- 1GB connection to internet through PRM provided by LightPath

### *Internal Network Connections*

- KHS, Kiel, and BOE connected to PRM via district owned fiber (underground)
- Stonybrook connected to PRM via 1GB fiber provided by LightPath
- PRM and KHS have Brocade wireless networks
- Stonybrook, Kiel and BOE have Aerohive wireless networks.

### *Servers*

- Microsoft Windows network running a Server 2012 R2 domain
- 11 servers district wide running Server 2003, 2008 R2, and 2012 R2

### *Clients*

- Most clients are Windows 10 Professional with some Windows 7 Professional and Mac OS.

## Acronym Key

TC	Technology Committee
IT	Information Technology Department
BO	Business Office
DCI	Director of Curriculum, Instruction and Assessment
P	Principals
S	Department Supervisors
T	Teachers
GAFE	Google Apps for Educaiton
BYOD	Bring Your Own Device
1:1	One to One
IWB	Interactive White Board
SB	Stonybrook
PRM	Pearl R. Miller Middle School
KHS	Kinnelon High School
DLE	Digital Learning Environment
LEA	Local Education Agency; the school district
KPSD	Kinnelon Public School District
ICD	Internet connected device
CAD	Computer-Aided Design

## Needs Assessment

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The Technology Committee (TC) created a needs assessment survey for students, staff and parents with the intention of gathering data to develop an idea of what our stakeholders – students, teachers and parents – wanted from the technology they use every day. The survey yielded the results below

### *What the 700 students said*

- Majority of respondents were from PRM - 20.4% and were in the Seventh Grade
- 97.2 % of respondents have internet access at home
- Most students report they have a desktop, laptop, tablet or phone for use at home
- Of the respondents, 23% report they are Satisfied or Very Satisfied with our technology
- Of those who participate in our nascent BYOD program, 83.1% bring smartphones
- 67% would rather bring their own device versus 33% who would prefer to either rent/purchase from the district or being loaned one - similar to a textbook.
- Most respondent students report that they use some sort of technology for their work during the school day (computers, tablets, IWBs)
  - 72.6% feel access to it is important
  - 18.2% report Frequent or Daily device use on assignments for school
  - Majority report they collaborate with other students on assignments, but don't use online tools (Edline, wikis, forums or blogs)
- 73.3% prefer paper books and a similar percentage report not using e-readers, voting devices, cameras, scanners, 3D printers or other peripherals
- Majority of subjective responses deal with hardware (requests for Apple Macbooks, iPads and smartphones)

### *What the 161 staff said*

- Mostly respondent staff members are from PRM (33.1%) and KHS (30.6%) and rate themselves as Intermediate level tech users
- If those respondents, 89.1% are familiar with GAFE
- 82.4% are familiar with Office365
- Vast majority are familiar with core Microsoft Office products (Word, Excel, PowerPoint), SMARTNotebook and Edline; significantly fewer report knowledge of programs such as Dropbox, Edmodo, Google Classroom or other DLEs, voting tech or podcasts
- 97.3% report frequent or higher for using technology in daily work life.
- 77.5% integrate technology into lessons
- 33.2% report teaching technology skills in class
- 41.1% report that they use web-based assignments
  - Research (59.4%)
  - Assessments (42.4%)
  - GAFE (25.3%)
- Most have not asked students to collaborate on an online assignment
- 48.1% of respondents feel that student access to devices would be a positive asset to their class
- Our staff would like to learn about
  - GAFE (73.6% - 83.1% already have a non-GAFE, personal Google account)
  - Interactive learning environments (47.2%)
  - Flipping the classroom (34.7%)
  - Using blogs, wikis, forums (30.6%)
  - Online assessments (29.2)
  - Digital citizenship (18.8%)
- Subjective responses from staff include:
  - PD on new or existing technologies

- Challenges using current technology (device difficulties, speed of internet, wifi access, computer and document camera distance from IWB/teaching wall)
- Planning time to integrate tech effectively
- A desire to use GAFE
- 1:1/BYOD use and management in the classroom
- Student access to email, GAFE, wifi and teaching students responsible use
- Not enough devices to go around
- Legalities of using technology (e.g., social media)
- Elimination of cell phones from BYOD policy

### *What the 305 parents said*

- Predominantly mothers of secondary students who self-report higher than average tech skills
- Most report there owning 5-10+ internet connected devices (ICDs) and high-speed internet access used regularly to communicate on several platforms at home
- 99% say their children have access to an ICD for schoolwork (mostly desktops/laptops, tablets or smartphones)
  - 78% report that their children use these devices to complete schoolwork
- They find automated phone calls and text messages, meetings, newsletters, email, web and social media posts useful, but are neutral on board meetings or HSA meetings' usefulness
- 60% report not visiting the district's website, 78% have not visited classroom websites, but 71% use the Powerschool portal
- 52% report their children speak about using technology in class.
- 52% report their children speak about using technology in class, specifically:
  - IWBs, computers, GoogleDocs, programming, assessments, CAD, aging technology, keyboarding, Microsoft Office and BYOD
- 92.7% feel it's important for students to develop technology skills at school
- Most are neutral or higher on a fully implemented BYOD, but when asked about BYOD, 64.5% feel it's a good, important or essential investment; 84.1% feel a 1:1 system is good, important or essential
- Most feel that a 1:1 initiative is Important or Very Important (71.4%), but report they would decide what to do in regards to purchasing a machine based on cost
- Most are unsure about the usefulness of wikis, forums, blogs and social media, digital imaging devices, document cameras, video conferencing, but most feel that access to online classes, e-books, and website development classes are important.
- Vast majority feel that schools should teach online safety, have online access to materials that support learning, work collaborative online
- Most are neutral or higher on how satisfied they are with the technology education we provide
- 59.3% report their child has a social media account of some kind,
- 94% report monitoring their child's online behaviors
- Of the subjective responses logged, the most common were:
  - BYOD/1:1
  - Use of Google/GAFE
  - Some report they want more technology; others report there's too much reliance on technology
  - A desire for increased access to online texts, courses, coding, CAD and to teach technology as a trade
  - Some respondents were fearful of bullying (online, students with less expensive computers being targeted)
  - Keyboarding versus handwriting
  - Teacher access to portable devices
  - Some commented on the district website's difficult user interface
  - Special education considerations

## **Analysis of the Data**

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From this data and input from the TC, four primary trends emerged:

- Technology must assist with teaching and learning processes
- Ensure our hardware and software are serving the purposes for which they are intended
- The district must embed professional development to bridge any learning gaps with technology
- The district must remain financially responsible, as well as ensure we are compliant with law and policy

From these trends, the TC developed three primary goals:

- **Goal 1:** Ensure that all technologies support state and federal guidelines and mandates, the district's curricular, programmatic, logistical and financial goals and community expectations.
- **Goal 2:** Support all technological initiatives through meaningful professional development and, conversely, support professional development through technology.
- **Goal 3:** Regularly revisit and refine this plan to:
  - Ensure the plan is moving in the expected timeframe toward the intended targets
  - Include and respond to emergent technologies; link technology to educational needs
  - Align policies, procedures and analyze for cost-effectiveness
  - Reduce to eliminate obsolescence, redundancy or inefficiency.



## Kinnelon Technology Inventory as of April 2017

	Interactive Whiteboards		Desktops		Laptops			Tablets		Printing/Imaging			
	IWB w/LCDs	Other LCDs	PC	Apple	PC	Apple	CBs	iPad	Surface	Printers/MFPs	Copiers	3D Printers	Scanners
<b>BOE</b>	-	3	6	-	3	-	20		-	4	1	-	-
<b>Kiel</b>	21	3	75	-	3	-	-	40	-	30	4	-	4
<b>SB</b>	35	3	173	12	180	-	-	18	-	57	4	-	
<b>PRM</b>	32	3	135	-	120	-	-	5	-	60	5	-	1
<b>KHS</b>	42	4	216	38	222	1	-	25	35	79	7	1	
<b>Aux</b>	-	1	16	-	4	-	-	-	-	11	2	-	
<b>Total</b>	<b>88</b>	<b>17</b>	<b>621</b>	<b>50</b>	<b>532</b>	<b>1</b>	<b>20</b>	<b>88</b>	<b>35</b>	<b>241</b>	<b>23</b>	<b>1</b>	<b>5</b>

# Kinnelon Public Schools Long-Range Technology Plan 2017-2020

## Implementation Planning

**Goal 1:** *Ensure that all technologies support state and federal guidelines and mandates, the district’s curricular, programmatic, logistical and financial goals, and community expectations.*

Projects/Activities (include the steps required to ensure activity completion)	Responsible for implementation and supervision	Grades	Timeline	Resources
Provide robust, useful, research-based and educationally sound technologies to all students.	IT, BO, DCI, P	K-12	2017-2020	As needed
Reduced dependency on hard wired, lab-based desktop computers and subsequent increase numbers of district-owned and student-provided portable wireless devices.	IT, BO, DCI, P	K-12	2017-2020	Increase usage of portable wireless devices
Reduce dependency on printed documents through graduated removal of classroom printers, movement toward workgroup printers, and electronic sharing through cloud services	IT, BO, P	K-12	2017-2020	Eliminate classroom printing; move toward workgroup printing and sharing
Universal access to cloud-based productivity systems for platform independent access to files, communication (e.g., email, messaging, etc.) programs and services for employees and developmentally appropriate access to students)	IT, BO, DCI, P	K-12	2017-2020	Introduction of cloud-based productivity systems
Encourage near 100% instructional use of a digital learning environment (DLE) to augment lessons, warehouse documents, broadcast class messages, etc.	IT, BO, DCI, P, S	K-12	2017-2020	Re-introduction of DLEs to all staff and students as appropriate
Embed all curricula and lesson plans with references to safe, appropriate responsible and educationally sound uses of technology, 21st Century Life and Skills, global and digital citizenship, and interdisciplinary application of algorithmic thinking	IT, BO, DCI, P, S, T	K-12	2017-2020	Curricular documentation
Centralize student performance data; provide access and analytical tools to teaching staff as appropriate	IT, DCI, P, S	K-12	2017-2020	Explore data warehousing and reporting solutions

Continue to utilize standards-based computerized testing to students as developmentally appropriate.	DCI, S, T	K-12	2017-2020	Monitor computerized testing systems for adherence to standards, usability and practicality.
Encourage and expand computer science and programming opportunities for as many students as possible.	P, S, DCI	K-12	2017-2020	Focus on building the program from with seed programs at each level. Prioritize underrepresented subgroups based on workforce statistics.

**Goal 2:** *Support all technological initiatives through meaningful professional development and, conversely, support professional development through technology.*

<b>Projects/Activities (include the steps required to ensure activity completion)</b>	<b>Responsible for implementation and supervision</b>	<b>Grades</b>	<b>Timeline</b>	<b>Resources</b>
Ensure all new technologies are paired with meaningful, long-term training to ensure staff are able to utilize the device or service with educational community as quickly as possible	DCI, P, S	K-12	2017-2020	Training materials as necessary
Strengthen relationships with other districts to share best practices and training and to reduce costs	DCI	K-12	2017-2020	Relationships between district staff and staff in other districts
Encouraging staff to attend trainings out-of-district and online	DCI, P, S	K-12	2017-2020	
Revitalizing extended-day teacher training models to augment district-offered professional development - invite other districts when possible	DCI	K-12	2017-2020	
Develop train-the-trainer and peer-to-peer models for technology integration	DCI	K-12	2017-2020	
Continue to embed good digital citizenship practices and responsible use in trainings for all employees	DCI, P, S, T	K-12	2017-2020	

**Goal 3:** Regularly revisit and refine this plan to: ensure the plan is moving in the expected timeframe toward the intended targets, include and respond to emergent technologies; link technology to educational needs, align policies, procedures and analyze for cost-effectiveness, reduce to eliminate obsolescence, redundancy or inefficiency.

Projects/Activities (include the steps required to ensure activity completion)	Those responsible for implementation and supervision	Grades	Timeline	Resources
Using prudent spending practices to supply safe and effective technologies to the entire educational community	IT, BO, DCI	K-12	2017-2020	Financial
Monitor for obsolete hardware and software (computing devices, IWBs, document cameras, video/surveillance equipment, server room equipment); repurpose when possible and practical	IT, BO	K-12	2017-2020	Replace resources as necessary
Near universal access to district wifi throughout all campuses through portable wireless devices for employees and students	IT, BO	K-12	2017-2020	Wifi hardware and software as necessary
Integration of devices to automate authentication of and protect regular and guest network users	IT	K-12	2017-2020	Authentication
Regularly review and align policies regarding technology for the educational community to align with current reality.	BO, DCI	K-12	2017-2020	Policy review
Ensure data security with all third party vendors through contracts and best practices (i.e., passwords, smart use of wifi, etc.)	IT, BO	K-12	2017-2020	Vendor contracts, training
Expand our social media presence for each building and the district to broadcast our message to Kinnelon and beyond	DCI, P	K-12	2017-2020	Social media platforms
Become 100% BYOD/1:1/hybrid capable	IT, BO, DCI	K-12	2017-2020	Infrastructure and devices as necessary
Ensure optimal and consistent layout, design and functionality of district and school websites	IT, DCI, P	K-12	2017-2020	Website platform

### Professional Learning

Goal #	Initial Activities	Locations	Follow-Up Activities (as appropriate)
1, 2	Training on any curricular, programmatic or assessment software, cloud-based systems and other logistical technologies (see Under Goal 2)	All	As necessary moving forward and with new staff
1, 2	Aligning in-house training to technology needs Exploring extended day, train-the-trainer and/or peer-to-peer training models	All	As appropriate
2	Creating relationships with other districts to realize economy of scale	All	As appropriate
3	Training on new policies and procedures	All	Annual and as necessary

### Financial

Goal #	Activity	Funding Source(s) (LEA/Federal/State/Private)	Amount
1,3	Curricular development to align (embedded into curricular revision cycle)	LEA	Approx \$20,000/year
2	Professional development activities to train staff on various technologies	Grants, then LEA as appropriate	Approx \$20,000/year
3	Replacement of aging IWB, computing and other technology	Grants, gifts, LEA, as appropriate	Approx \$60,000/year
1, 2, 3	Equip staff with wireless, portable devices linked to wifi and IWBs	Grants, gifts, LEA, as appropriate	Approx \$30,000
3	Filtering, authentication maintenance, usage and capacity costs	LEA	Approx \$120,000/year