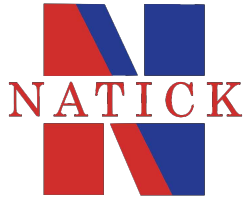


# NATICK PUBLIC SCHOOLS FY22 TECHNOLOGY BUDGET REQUEST JANUARY 25, 2021

Dennis Roche, CISA, CISM, CETL  
Director of Technology





# AGENDA

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1. Annual Technology Reports
2. FY22 Technology Budget Request



# ANNUAL TECHNOLOGY REPORTS



## INVENTORY SUMMARY & RECONCILIATION OF 2019 TO 2020

Total number of devices as of 12/31/2019	8468
Number of computers added in 2020	1941*
Number of computers retired YTD in 2020	(199)
Additional computers to retire in 2020	(161)
<b>Total number of devices as of 12/31/2020 (Increase of 1581)</b>	<b>10049**</b>

**\* One asset was purchased and retired in 2020.**

**\*\* Does not include devices on order for Middle Schools or Kennedy Building Project.**





# INVENTORY SUMMARY BY LOCATION

	BEN	BRO	ESC	HL	JOH	KEN	LIL	MEM	NHS	OOD	PRE	TEC	TWN	WIL	Grand Total
Chromebook	114	81		836	44	860	80	80	599		2	460	22	1048	4226
Chromebox	4				1	26	3	3	19					3	59
Desktop	6	11		1	2	10	3	12	153		6	67	1	32	304
iPad	331	292	46	2	137	189	275	212	52	9	48	84	25	295	1997
iPod	12	1	1		1	4	23	15	12			1		4	74
Laptop	114	95	13	64	51	301	110	61	1526	2	27	536	29	310	3239
Tablet				1					101			11		37	150
<b>Grand Total</b>	<b>581</b>	<b>480</b>	<b>60</b>	<b>904</b>	<b>236</b>	<b>1390</b>	<b>494</b>	<b>383</b>	<b>2462</b>	<b>11</b>	<b>83</b>	<b>1159</b>	<b>77</b>	<b>1729</b>	<b>10049</b>

% of Total Devices 6% 5% 1% 9% 2% 14% 5% 4% 24% 0% 1% 12% 1% 17%

	BEN	BRO	ESC	HL	JOH	KEN	LIL	MEM	NHS	OOD	PRE	TEC	TWN	WIL	Grand Total
2009	2	2				5	11	1	3		1	2			27
2010	4				1	23	13	1	4		4	1		14	65
2011	32	4			5	70	8	2	15		2	11	1	13	163
2012	86	40	1	1	5	45	7	23	84		6	25	7	36	366
2013	50	34	1		26	31	16	29	10		4	9	12	34	256
2014	93	113	5	21	61	155	161	104	127	1	25	110	7	320	1303
2015	13	16	7	1	4	67	10	6	27	3	3	46	8	116	327
2016	107	110	9	188	33	322	16	26	116	1	8	340	11	392	1679
2017	154	120	12	174	71	197	206	149	538	3	5	56	10	326	2021
2018	7	16	9	136	13	111	29	8	385	2	4	53	5	75	853
2019	30	24	16	103	16	103	14	29	536	1	19	77	15	66	1049
2020	3	1		280	1	261	3	5	617		2	429	1	337	1940
<b>Grand Total</b>	<b>581</b>	<b>480</b>	<b>60</b>	<b>904</b>	<b>236</b>	<b>1390</b>	<b>494</b>	<b>383</b>	<b>2462</b>	<b>11</b>	<b>83</b>	<b>1159</b>	<b>77</b>	<b>1729</b>	<b>10049</b>



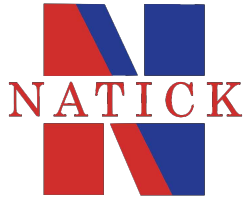
# INVENTORY SUMMARY BY YEAR

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Grand Total
Chromebook					7	6	99	825	886	343	228	1832	4226
Chromebox									32	2		25	59
Desktop	8	9	4	23	8	32	5	79	72	1	62	1	304
iPad		1	33	112	195	801	71	237	384	73	49	41	1997
iPod	12	13	8	18	7			12	2	2			74
Laptop	7	40	118	183	37	455	97	524	644	429	696	9	3239
Tablet		2		30	2	9	55	2	1	3	14	32	150
<b>Grand Total</b>	<b>27</b>	<b>65</b>	<b>163</b>	<b>366</b>	<b>256</b>	<b>1303</b>	<b>327</b>	<b>1679</b>	<b>2021</b>	<b>853</b>	<b>1049</b>	<b>1940</b>	<b>10049</b>
% of Total Devices	0%	1%	2%	4%	3%	13%	3%	17%	20%	8%	10%	19%	

Asset Count													
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Grand Total
BEN	2	4	32	86	50	93	13	107	154	7	30	3	581
BRO	2		4	40	34	113	16	110	120	16	24	1	480
ESC				1	1	5	7	9	12	9	16		60
HL				1		21	1	188	174	136	103	280	904
JOH		1	5	5	26	61	4	33	71	13	16	1	236
KEN	5	23	70	45	31	155	67	322	197	111	103	261	1390
LIL	11	13	8	7	16	161	10	16	206	29	14	3	494
MEM	1	1	2	23	29	104	6	26	149	8	29	5	383
NHS	3	4	15	84	10	127	27	116	538	385	536	617	2462
OOD						1	3	1	3	2	1		11
PRE	1	4	2	6	4	25	3	8	5	4	19	2	83
TEC	2	1	11	25	9	110	46	340	56	53	77	429	1159
TWN			1	7	12	7	8	11	10	5	15	1	77
WIL		14	13	36	34	320	116	392	326	75	66	337	1729
<b>Grand Total</b>	<b>27</b>	<b>65</b>	<b>163</b>	<b>366</b>	<b>256</b>	<b>1303</b>	<b>327</b>	<b>1679</b>	<b>2021</b>	<b>853</b>	<b>1049</b>	<b>1940</b>	<b>10049</b>



# **FY22 TECHNOLOGY BUDGET REQUEST**



# GOALS FOR FY22 TECHNOLOGY BUDGET

1. Provide incoming high school freshman with new Chromebook.
2. Expand Student 1 to 1 Program to grades 5 & 6.
3. Replace and refresh obsolete teacher laptops.
4. Replace and refresh obsolete devices at Elementary Schools.





# FY22 TECHNOLOGY BUDGET REQUEST

## Operating Budget

Objective	FY21	FY22	Variance
Supplies	\$3,500	\$3,500	-
Equipment Replacement	\$699,279	513,589	(\$185,690)
Equipment (New)	-	-	-
AV	\$15,000	\$15,000	-
Purchase of Services	\$360,000	\$405,546	\$45,546
Software	\$69,500	\$85,600	\$16,100
LAN/WAN Maintenance	\$244,500	\$273,500	\$29,000
System Wide - Copiers	\$395,000	\$395,000	-
	=====	=====	=====
<b>Total</b>	<b>\$1,786,779</b>	<b>\$1,691,735</b>	<b>(\$95,044)</b>



# EQUIPMENT REPLACEMENT - DECREASE OF \$185,690

## SUSTAINABILITY PLAN

	Target Life	FY22	FY23	FY24	FY25	FY26
		July 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025
<b>High School Student Device Sustainability (Chromebooks 3 Year Lease):</b>						
Incoming Freshman FY22	4 Years	N/A	N/A	N/A	N/A	N/A
Incoming Freshman FY23	4 Years	N/A	\$60,000.00	\$60,000.00	\$60,000.00	\$0.00
Incoming Freshman FY24	4 Years	N/A	N/A	\$60,000.00	\$60,000.00	\$60,000.00
Incoming Freshman FY25	4 Years	N/A	N/A	N/A	\$60,000.00	\$60,000.00
Incoming Freshman FY26	4 Years	N/A	N/A	N/A	N/A	\$60,000.00
Incoming Freshman FY27	4 Years	N/A	N/A	N/A	N/A	N/A
Incoming Freshman FY28	4 Years	N/A	N/A	N/A	N/A	N/A
Incoming Freshman FY29	4 Years	N/A	N/A	N/A	N/A	N/A
<b>High School Labs &amp; Building Systems:</b>						
Video Editing Lab - 3 Year Lease	4 Years	\$14,399.40	\$14,399.40	\$14,399.40	\$14,399.40	\$14,399.40
Web Design Lab (One Time Purchase - Cash)	4 Years	\$0.00	\$0.00	\$51,000.00	\$0.00	
Game Design & Art Lab (One Time Purchase - Cash)	4 Years	\$0.00	\$0.00	\$51,000.00	\$0.00	
Foreign Language Lab - 3 Year Lease	4 Years	\$7,189.40	\$7,189.40	\$7,189.40	\$0.00	
Zspace Lab (One Time Purchase - Cash)	4 Years	\$60,000.00	\$0.00	\$0.00	\$0.00	
Security System Replacement Hardware	4 Years	\$32,000.00	\$0.00	\$0.00	\$0.00	
<b>MS Chromebooks for Students : (One Time Purchase to Expand 1 to 1 to Grades 5 &amp; 6)</b>						
Wilson Students (Incoming Grades 5 -7) 750 Chromebooks - Grant Funding in FY21	4 Years	N/A	N/A	N/A	N/A	N/A
Kennedy Students (Incoming Grades 5 -7) 750 Chromebooks - Kennedy Building Project	4 Years	N/A	N/A	N/A	N/A	N/A
Wilson & Kennedy Incoming 8th Graders FY22 (New devices provided in FY21)	4 Years	N/A	N/A	N/A	N/A	N/A
<b>MS Chromebooks for Students : (Chromebooks 3 Year Lease)</b>						
Incoming 5th Graders FY23	4 Years	N/A	\$60,000.00	\$60,000.00	\$60,000.00	
Incoming 5th Graders FY24	4 Years	N/A	N/A	\$60,000.00	\$60,000.00	\$60,000.00
Incoming 5th Graders FY25	4 Years	N/A	N/A	N/A	\$60,000.00	\$60,000.00
Incoming 5th Graders FY26	4 Years	N/A	N/A	N/A	N/A	\$60,000.00
Incoming 5th Graders FY27	4 Years	N/A	N/A	N/A	N/A	N/A
Incoming 5th Graders FY28	4 Years	N/A	N/A	N/A	N/A	N/A
Incoming 5th Graders FY29	4 Years	N/A	N/A	N/A	N/A	N/A
<b>Elementary Devices for Students :</b>						
Elementary Schools (Re-fresh old aging devices)	4 Years	\$300,000.00	\$300,000.00	\$0.00	\$0.00	\$0.00
<b>Teacher Laptop Sustainability: (Laptops 3 Year Lease)</b>						
Teacher Laptop Replacements - Replace 250 each year	3 Years	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00
Teacher Laptop Replacements - Replace 250 each year	3 Years	N/A	\$100,000.00	\$100,000.00	\$100,000.00	\$100,000.00
Teacher Laptop Replacements - Replace 250 each year	3 Years	N/A	N/A	\$100,000.00	\$100,000.00	\$100,000.00
<b>Total Cost:</b>		\$513,588.80	\$641,588.80	\$663,588.80	\$674,399.40	\$764,399.40
<b>Budget:</b>		\$699,279.00	\$699,279.00	\$699,279.00	\$699,279.00	\$699,279.00
<b>Budget Variance:</b>		-\$ 185,690.20	-\$ 57,690.20	-\$ 35,690.20	-\$ 24,879.60	-\$ 65,120.40

[Link to Sustainability Plan](#)



# EMPLOYEE LAPTOP AGE REPORT Fy21

## Summary of Employee Laptop Age

- 546 employees have a laptop 3 years or newer.
- 716 employees have a laptop 5 years or newer.
- **264 employees have a laptop 6 to 11 years old.**

Age	Year	Count
New	2020	6
1	2019	240
2	2018	51
3	2017	249
4	2016	135
5	2015	35
6	2014	162
7	2013	24
8	2012	58
9	2011	17
10	2010	1
11	2009	2
	<b>Total</b>	<b>980</b>



# EMPLOYEE AGE REPORT FY21

## ALL DEVICES

Age	Year	Chromebook	IPad	Laptop	Total
New	2020	17	22	6	45
1	2019	24	18	240	282
2	2018	12	14	51	77
3	2017	7	29	249	285
4	2016	45	21	135	201
5	2015	18	23	35	76
6	2014	1	41	162	204
7	2013	1	59	24	84
8	2012		23	58	81
9	2011		1	17	18
10	2010			1	1
11	2009			2	2
	Total	125	251	980	1356



# PURCHASE OF SERVICES - INCREASE OF \$45,546

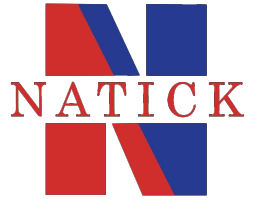
## 1. Increases:

a. Power School	<u>\$43,346</u>
b. Increased Dark Fiber & Internet Bandwidth	\$ 3,400
c. DialPad - Remote Technical Support	\$ 4,500
d. Google Enterprise for Education Licenses	\$32,500
e. School Messenger Communicate	\$ 8,800
	<b>\$92,546</b>

## 2. Decreases:

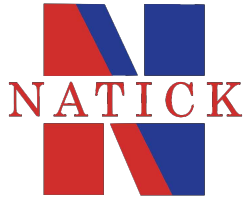
a. Hosting of IPass	(\$10,000)
b. Esped (Now part of PowerSchool)	(\$22,000)
c. BlackBoard Connect (Being Replaced)	(\$15,000)
	<b>(\$47,000)</b>





## SOFTWARE - INCREASE OF \$16,100

- Splashtop - Remote Control Software for HS & MS Labs \$16,100



# LAN/WAN MAINTENANCE

## INCREASE OF \$29,000

### 1. Increases:

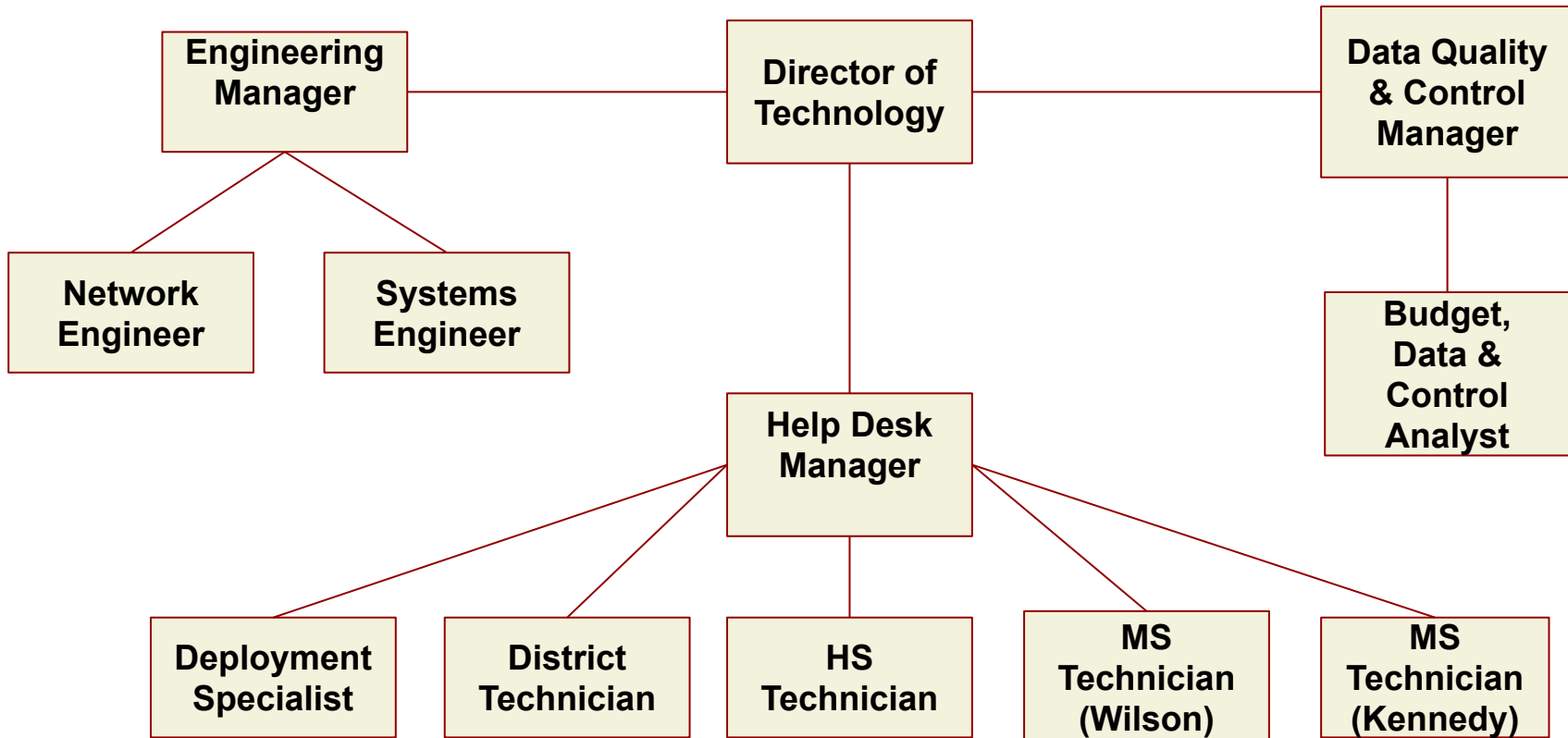
- a. Maintenance Agreement for Security Systems \$40,000

### 2. Decreases:

- a. Network Mgmt Tools - Obsolete & Retired (\$11,000)

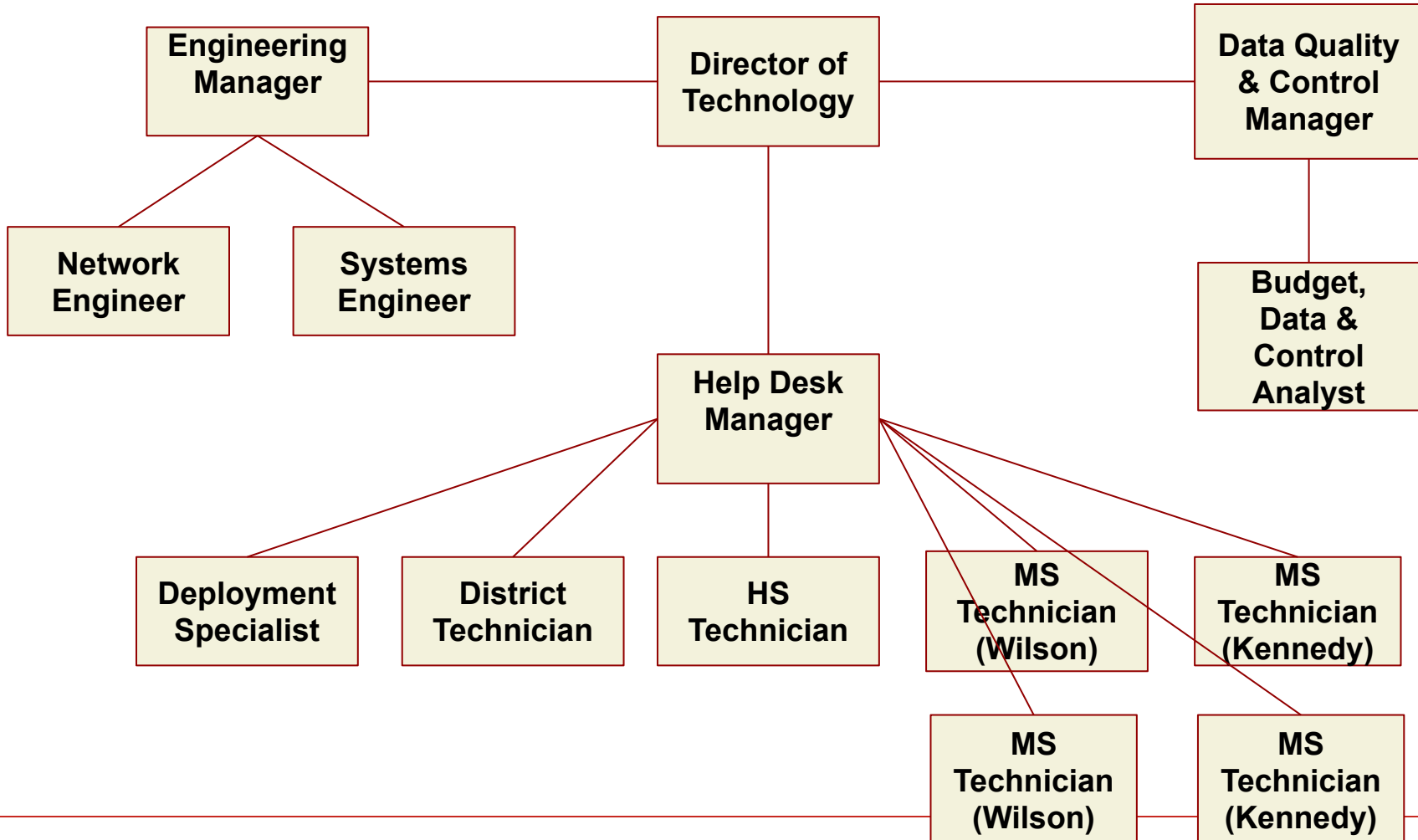


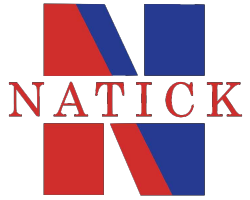
# CURRENT TECHNOLOGY SERVICES STAFF





# PROPOSED TECHNOLOGY SERVICES STAFF





# DEVICE & LOCATIONS TO TECHNICIAN RATIOS

	FY19	FY20	FY21	FY22 No New Techs	FY22 With 2 New Techs
Devices	9117	8468	10049	11549	11549
Technicians	5	5	4	4	6
Supported Locations	10	10	10	10	10
Technicians per Device	1 to 1824	1 to 1694	1 to 2512	1 to 2887	1 to 1924
Technician per Location	1 to 2	1 to 2	1 to 2.5	1 to 2.5	1 to 1.6

**These ratios significantly impact how we operate.**





# HISTORY OF STUDENT 1 TO 1 PROGRAM AND TECHNICIAN RATIOS

	Prior to 1:1 Program	(FY12) August 2011	(FY13) August 2012	(FY15) August 2014	(FY18) August 2017	(FY21) July 2020	(FY22) August 2021 No New Techs	(FY22) August 2021 2 New Techs
8th Grade	-	400	400	400	400	400	400	400
9th - 12 Grade (New NHS)	-	-	1500	1500	1500	1500	1600	1600
7th Grade	-	-	-	-	400	400	400	400
5th & 6th Grade	-	-	-	-	-	-	800	800
Technicians	2	4	4	5	5	4	4	6
Technicians per 1:1 Student	-	1 to 100	1 to 475	1 to 380	1 to 460	1 to 575	1 to 800	1 to 533

**These ratios significantly impact how we operate.**