

Arlington Public Schools 2019-2024 District Technology Plan

Executive Summary

The 2019-2024 Strategic Technology Learning Plan steers the direction of technology use and implementation for the Arlington Public Schools through the next five years and beyond. The plan is closely connected to the mission of the district: “*Arlington Public Schools educates all students, preparing and inspiring them to graduate and seek their full potential as lifelong learners.*” Technology can transform teaching and learning by engaging, extending and enhancing rich and flexible learning environments that reward collaboration and accommodate the needs of individual learners. In order for every student to have equitable and adequate access to robust learning with integrated technology, all teachers must continue to grow in their tech integration skills.

This plan will serve as the primary tool to guide the district’s acquisition, sustainability, and integration of technology that supports the district’s goals. It lays the groundwork to build on and improve our technology infrastructure and use our existing technology investments. The Technology Advisory Committee will provide continuing planning, oversight and an opportunity to continue to refine and evaluate the plan. An annual review process will provide an opportunity to align technology funding with the district’s Strategic Plan.

As we reviewed comments from parents and teachers it became apparent there are three areas that need to be addressed first:

- Continuing needs for adequate and equity of access for students and staff
- A thorough professional development plan
- A process to create and sustain a robust and flexible network

The following questions guided the work of the Technology Learning Strategic Plan:

1. Where do we want to be? (Goals)
2. Where are we now? (Current State)
3. How do we get there (Action plan)
4. What measures will tell us when we get there? (Implementation and Assessment)

This plan will bring continued direction for the need for essential funding of technology that is foundational to support classroom instruction. Together, through the power of technology, we can continue to ensure a strong education for all students.

Quote: Today's educational system faces irrelevance unless we bridge the gap between how students live and how they learn. – Partnership for 21st Century Skills

1.0 Our District

1.1 Our Mission

• *Arlington Public Schools educates all students, preparing and inspiring them to graduate and seek their full potential as lifelong learners.*

1.2 Our Vision for Student Achievement*

• *Every Arlington student graduates well-prepared and motivated for future education and employment.*

• *Staff delivers a research-based, challenging, and aligned curriculum in every classroom, using assessment data to improve instruction.*

• *Students and families are active and integral participants in the learning process.*

*Other sections of the Arlington Public Schools Vision include *Safe and Caring Environment, Stewardship and Continuous Improvement*. These also influence and guide this Technology Learning Strategic Plan.

1.3 Our Collective Commitments

• *We accept learning as the fundamental purpose of our schools and District and therefore we will examine all practices in light of their impact on student learning.*

• *We are committed to working together to achieve our collective purpose. We cultivate a collaborative culture through the development of high-performing teams.*

• *We assess our effectiveness on the basis of results rather than intentions. Individuals, teams, and schools seek relevant data and information and use that information to promote continuous improvement.*

2.0 Technology Learning Plan

2.1 Vision

As we inspire and empower students to leverage technology to enhance learning and citizenship, we should inspire and empower teachers to include technology as they create rich tasks.

2.2 Current State:

Question: Where are we now?

Our technology department has devoted considerable time and funds toward improving our infrastructure, upgrading classrooms and investing in mobile devices (Chromebooks). As a result, we have a robust wireless network that covers all of our instructional areas and have upgraded the connection speeds at all of our schools. We have over 5500 Chromebooks available to students in the district and all of our

classrooms have teacher laptops, ceiling mounted projectors, document cameras, and speakers.

We have offered some professional development through classes at the Summer Academy and some classes with small groups of teachers in their buildings. We have not met our goal of offering online classes and have developed some video tutorials. Buildings have done some staff development and also teachers have done some peer to peer coaching. We have limits on the amount of paid teacher time that we can use for technology training.

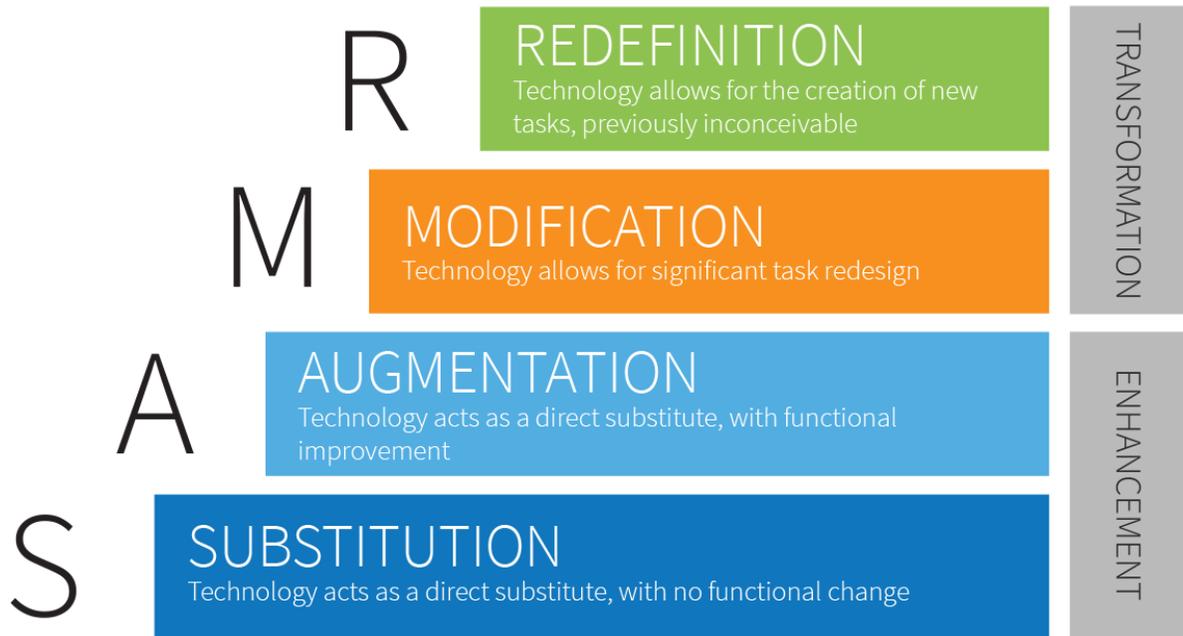
2.3 Technology Goals and Action Plan:

Question: Where do we want to be?

In the next five years, Arlington Public Schools will address these three issues as the most critical: Adequate and Equity of Access, Professional Development, and Robust Infrastructure.

Adequate and Equity of Access

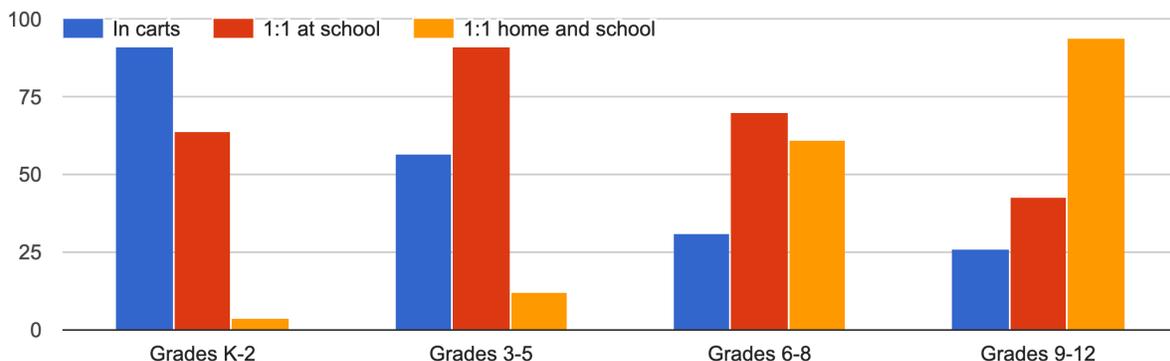
It is important that the playing field is leveled so that each APS student will have adequate and equitable access to a technology-enriched learning experience. We also need to assist teachers in developing rich tasks that leverage technology to build engagement and enhance and extend the learning experience. We will use the framework of the SAMR (Substitution, Augmentation, Modification, and Redefinition) Model to assist teachers in evaluating their lesson designs and to lead students toward high order thinking skills.



Although each classroom is outfitted with our standard technology equipment, we do find gaps in the tech available. There is much more uniformity in student access to Chromebooks across the district. We have not resolved a system to accommodate requests for special equipment such as touch displays (Smart or Promethean boards), touch tv's, iPads, and other special equipment.

The chart below shows teacher responses to the question of whether we should house Chrombeook in carts in classrooms or assign them to students in a 1:1 take home model. Our plan will include further discussion and planning around this issue.

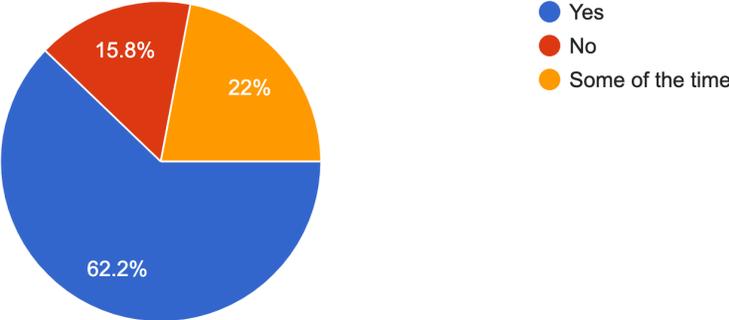
Chromebook distribution: We currently have over 5500 chromebooks available for students. Housing them ...s to assign chromebooks to students?



We also sought student input on their need for technology access at home. Below are the results of a brief survey of Arlington High School students in June 2019.

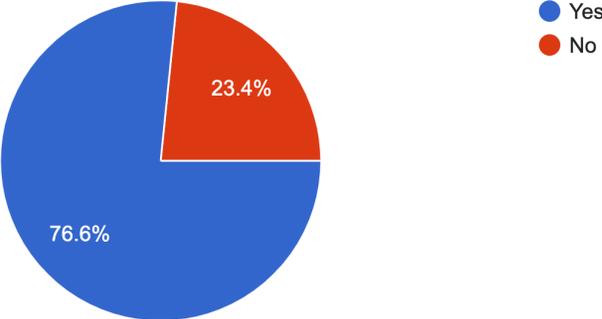
Do you have access to a computer at home that you can use for schoolwork?

513 responses



If you had a Chromebook to use at home, would it help you to keep up with your school work?

513 responses



Professional Development

One of the themes from staff is the need for a strong, ongoing professional development component. We plan to offer some core courses in areas that can support every teacher using Chromebooks in the classroom. We will start with Classroom management and engagement using technology, Media Literacy and Internet Safety, and Google Classroom. Our goal is to have every staff member confident and independent with technology. We will expand our menu of training opportunities to assist teachers in designing more enriched lessons. There are challenges in finding the time and opportunity to offer training. Our approach is to offer a rich menu of training opportunities. These include micro-credential online skills training, enriched lessons developed with PLC groups, tech Monday help desk sessions in schools, ready-made tech tips to share with staff, and scaffolded technology modules that allow staff to progress at their level.

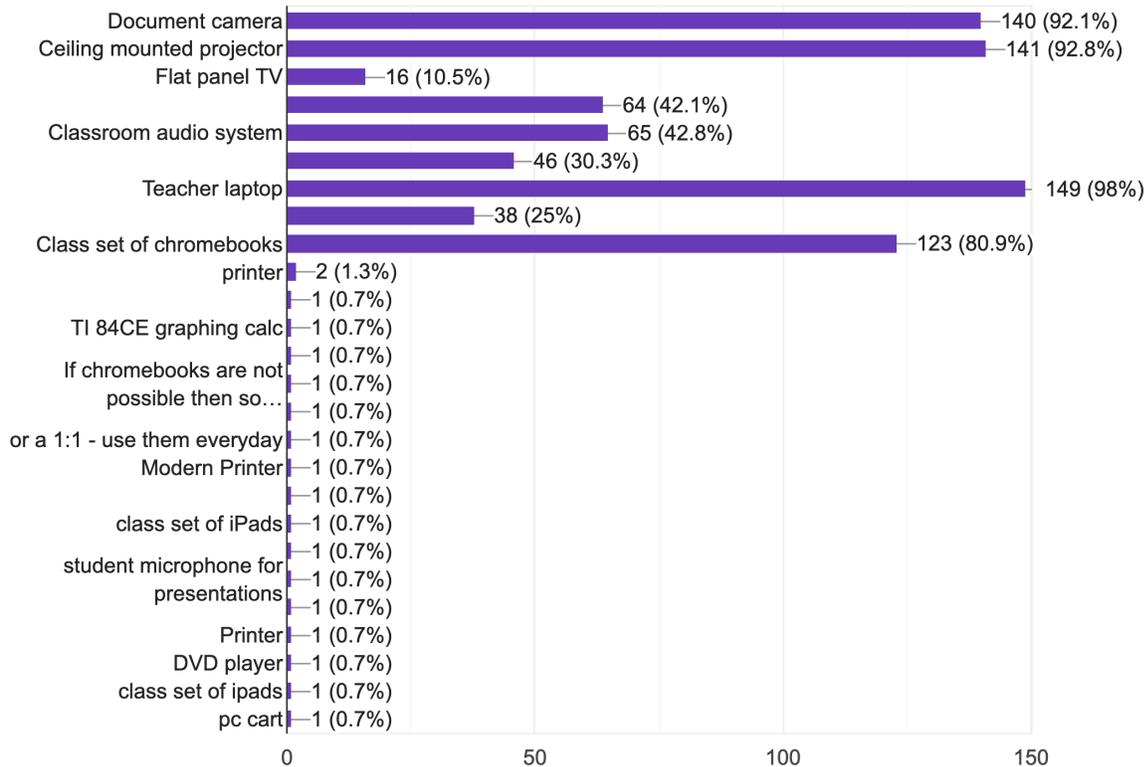
Robust Infrastructure

Our progress on staff utilizing technology to provide rich tasks to students will be the driving force of determining our needs in the type of equipment, home/school access, and amount of equipment available to schools.

In order to deliver the technology our students require for learning, the unseen aspect of our technology, the behind the scenes, is a critical component including bandwidth, access to cloud technologies, filter systems, wireless access, back-up services, and the anticipation of end-of-life for all equipment to create a sustainable system and a robust network.

Which classroom technology tools are important for you to have in your classroom? (check all that apply)

152 responses



This table is the result of a teacher survey conducted this year on the types of classroom technology teachers need. It reflects the overall desire for a well equipped instructional space and also the needs that some teachers have for specialized technology equipment.

Question: How do we get there?

Adequate and Equity of Access Action Plan

Action Plan	Timeline
Monitor and adjust the classroom teaching stations to support rich tasks and learning.	2019 - 2024
Pilot Chromebook home checkout program at AHS – initially make laptops available for checkout from the library	2019 - 2020
Depending on staff/student and community discussions, pilot home use of Chromebooks at AHS with freshman class.	2020 - 2021
Chromebooks distributed at the following ratios: 1:1 grades 9 - 12 (look at possible 1:1 home use) 1:1 grades 6 - 8 1:1 grades 3 - 6 1:2 grades K - 2	2019 - 2024
Develop plan to accommodate unique requests for technology including those that support special needs students.	2019 - 2022

Professional Development Action Plan

Action Plan	Timeline
A comprehensive menu and calendar of clock-hour offerings. We will utilize a micro-credentialing system to recognize the completion of modules. This system will also support the training of new staff members.	2019 - 2020
Work with PLC teams to develop at least one technology-infused rich task lesson for each semester	2019 - 2023

<p>A basic set of teacher courses will be developed so that all staff has the same core competencies. Initial courses will include: Classroom management and engagement with tech, Media Literacy and Internet Safety, Google Classroom, Google Tools</p>	<p>2019 - 2021</p>
<p>Work with Leadership Team to develop 15 - 30-minute tech tidbits that can be shared during building meetings or staff development activities</p>	<p>2019 - 2022</p>
<p>Teachers will be trained in integrating Internet safety and Media Literacy. A scope and sequence of lessons using materials from Common Sense Media will be developed.</p>	<p>2019 - 2024</p>
<p>A system for frequent feedback from staff on their perception of needed training and self-reflection of tech use will be established.</p>	<p>2020 - 2024</p>
<p>A plan will be developed to have an online repository of video clips and step-by-step directions for follow-up after instructional technology classes. A presenter could be paid to edit the video and write the step-by-step.</p>	<p>2020 - 2024</p>

Robust Infrastructure Action Plan

Develop and maintain a robust telecom, network, and data infrastructure that will support a highly dense range of access for computing devices.

Action Plan	Timeline
Process inefficiencies: Examine each district department on a rotating basis. Evaluate current business practices and update services to utilize more cost-effective and efficient products and processes.	2019 - 2024
Ease of Access: Explore ways to provide wifi to students after hours. Provide access to the district network and work with the City of Arlington to support wifi access.	2019 - 2021
Data Interoperability and safety: Automate streams of data between Skyward and 3 rd party applications to roster student accounts. Ensure that vendors adhere to student data privacy guidelines.	2019 - 2020
Robust Network: Work to improve the robustness and consistency of the wireless network.	2019 - 2024
Sustainable Infrastructure: Continue to monitor and evaluate the phone, intercom and video systems in the buildings. Evaluate and expand the video surveillance in all buildings to enhance safety and security.	2019 - 2024

3.0 Funding Strategy and Budget

The effectiveness of this plan will be limited by the ability to acquire, update and replace equipment. Having current technologies available will assure equity of technology access across the district. Using and supporting current technology enhances learning; therefore, accelerating student achievement.

To achieve this success we believe in supporting technology resources, services, and programs in the district offices and classrooms using all available sources. Currently, technology funding is provided by levy funds.

The infusion of funds from the previous technology plan allowed us to achieve our goal of providing mobile devices to students across the district, and to build out our infrastructure. A funding cycle of five years will guide our conversation about annual costs and replacement cycles for technology equipment. The proposed plan outlines costs for standardized and sustainable classroom technology and support for infrastructure, software, and network systems. We will review this budget annually through the Technology Advisory Committee.

4.0 Implementation

Question: What Measures Will Tell Us When We Get There?

A Tech Learning Advisory Committee will be established to monitor and adjust the plan. All schools and administration will be represented. The committee will develop and use feedback tools to help with monitoring. This team will also provide support and ensure alignment with tech learning goals for building initiatives. The team will develop ways to monitor equity and access. They will also provide oversight for the professional development component.

5.0 Technology Plan Proposed Budget

Chromebooks	5 year refresh	6000 Student chromebooks		Yearly cost by category	
	Price	Total	Yearly Total	\$ 350,250.00	
1250	\$ 250.00	\$ 312,500.00	\$ 312,500.00	2-12 1:1 chromebooks	
30	\$ 250.00	\$ 7,500.00	\$ 7,500.00	other special requests	
75	\$ 350.00	\$ 26,250.00	\$ 26,250.00	K-1 1:2 chrombooks	
Parts & Repairs	\$ 4,000.00		\$ 4,000.00		
				All laptops/desktops	
Teacher Laptops	400 Staff	staff yearly	6 year refresh	\$ 129,000.00	
	Mac				
70	1000	\$ 70,000.00	Yearly Total		
	Windows		\$ 80,000.00		
10	1000	\$ 10,000.00			
Classified Laptops	6 yr referesh				
15	1000	\$ 15,000.00			
Office Staff	6 yr refresh				
30	800	\$ 24,000.00			
Leadership					
10	1000	\$ 10,000.00			
				Classroom equipment	
Classroom		30 CR Yearly		\$ 60,900.00	

	TV/Projektor	Total		
1	800.00	\$ 800.00		
	DocCam			
1	650.00	\$ 650.00		
	Chromebook Station			
1	350.00	\$ 350.00		
	Touch Screen			
1	200.00	\$ 200.00		
	speakers			
1	\$ 30.00	\$ 30.00		
	Total	\$ 2,030.00	Yearly Total	
30	Classrooms/Year	\$ 60,900.00	\$ 60,900.00	
				Servers
Server	Infrastructure/YR	Yearly Total	7 yr refresh	
1	\$ 7,500.00	\$ 7,500.00		\$ 7,500.00
				Wireless system
Wireless	Infrastructure/YR	Yearly Total	6 yr refresh	
1	\$ 22,000.00	\$ 22,000.00		\$ 22,000.00
				Firewall/Switches
Firewall/Switches	/YR	Yearly Total	7 yr refresh	Firewall/Switches
1	\$ 8,000.00	\$ 8,000.00		\$ 8,000.00
				Software licenses
Subscription	Licenses/YR		8 yr refresh	\$ 50,000.00
Remind	1	\$ 5,000.00		
Microsoft	1	\$ 16,000.00		
Adobe cloud	1	\$ 1,000.00		
Sophos	1	\$ 5,000.00		
Firewall	1	\$ 5,000.00		

GoGuardian	1	\$ 10,000.00			
ZuluDesk	1	\$ 7,000.00			
AirWave	1	\$ 1,000.00			
Security Cameras	Yr			Security Cameras	
1	\$ 8,000.00	\$ 8,000.00	Yearly Total	\$ 8,000.00	
Telephones	switch 8 yr/phones 15 yr	Yearly refresh		Phones	
1	3000	3000		\$ 12,900.00	
33	300	9900			
Equipment Repair					
	20000			20000	
Building Tech Budgets					
	75000			75000	
Computer Supplies					
	50000			50000	
Contingency Fund					
1	20000	20000		20000	
Tech Staff training					
1	5000	5000		5000	
District staff training					
	30000	30000		30000	
Yearly Total	projected growth	SY 2020 budget	SY 2021 budget	SY 2022 budget	SY 2023 budget
\$ 848,550.00	5% growth	\$ 890,977.50	935526.375	982302.6938	1031417.828

Technology Plan Committee Members:

Will Nelson – Principal at Weston High School and Stillaguamish Valley Learning Center

Mark Ehrhardt – Technology Director

Janli Weston – Middle School Teacher

Nikki Brooks – Elementary Teacher

Ann Hayman - High School English/Language Arts Teacher

Hillary McGuire - Parent

Terri Stanton - Middle School Social Studies Teacher

Rachel Newby - Elementary Teacher

Maureen Skomerza - Elementary Teacher

Jacqueline Arnold - Elementary Librarian

Shannon Raider - Network Engineer

Marilee Herman - High School Assistant Principal