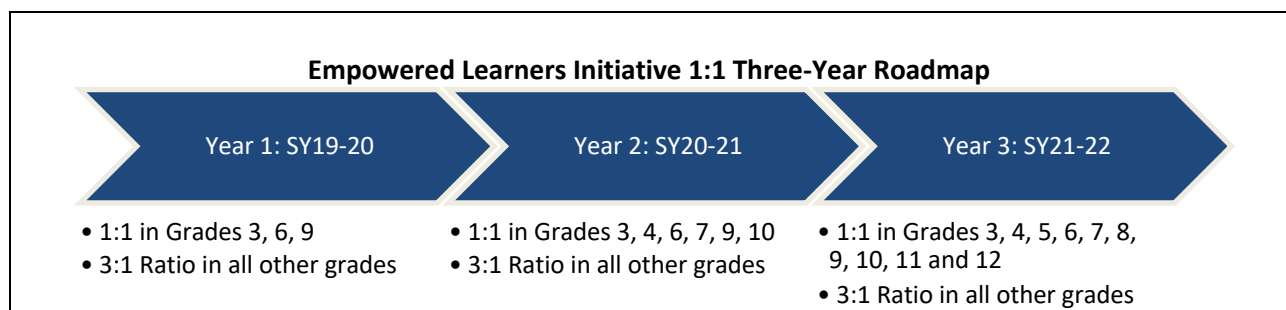DISTRICT OF COLUMBIA
PUBLIC SCHOOLS

ELi

The Empowered Learners Initiative:
3-Year Technology Integration Roadmap

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Technology infuses every aspect of modern society, including in the lives of our young people. Students today rely on technology to connect to their families, their peers, and the world around them, and can do so easily through devices they encounter inside and outside of the classroom. To give our students the tools they need to be 21st-century learners, and to ensure they are using technology in safe and relevant ways, DC Public Schools (DCPS) launched the Empowered Learners initiative (ELi) in School Year 2019-2020 (SY19-20). This initiative allows students to learn as collaborators, leaders, and creators of content, and to increase student agency and achievement through technology-enhanced instruction.

ELi is a comprehensive three-year commitment, endorsed by Mayor Bowser in the Fiscal Year 2020 (FY20) budget, to close the digital divide and empower every learner through technology. Over the next three years, DCPS will ensure students in grades 3-12 have equitable access to technology through a 1:1 student-to-device ratio, and that DCPS educators are equipped with the skills and knowledge needed to support students in leveraging technology for learning.

For the first year of the initiative in SY19-20, DCPS is ensuring a 1:1 student-to-device ratio in grades 3, 6, and 9 and a 3:1 ratio in all other grades. As devices are deployed, teachers and school leaders will receive the aligned resources they need to be successful, including professional development to support technology integration in learning, curricular and teaching resources, technology and logistical support, and outside the classroom resources for students and families.
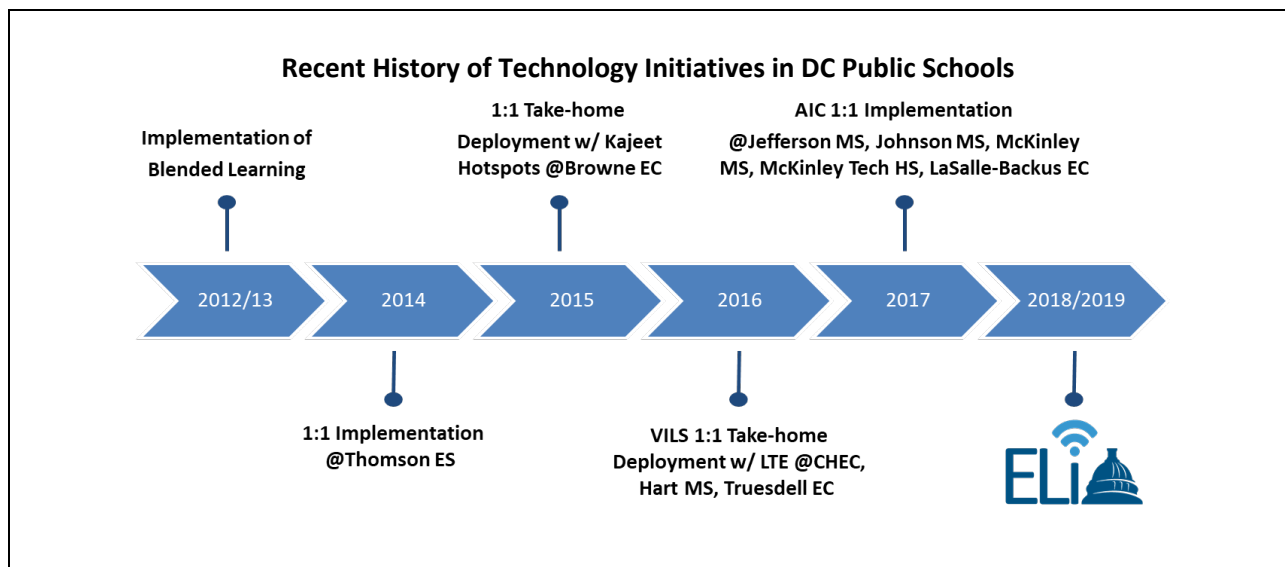
Empowered Learners Initiative 1:1 Three-Year Roadmap

Year 1: SY19-20	Year 2: SY20-21	Year 3: SY21-22
• 1:1 in Grades 3, 6, 9 • 3:1 Ratio in all other grades	• 1:1 in Grades 3, 4, 6, 7, 9, 10 • 3:1 Ratio in all other grades	• 1:1 in Grades 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 • 3:1 Ratio in all other grades

Brief History of Education Technology in DCPS

Over the last several years, DCPS has heard from students, families, educators, and communities about the need for technology in their schools and what meaningful infusion of technology with the DCPS curriculum looks like. This stakeholder feedback, along with lessons learned from 1:1 pilots in DCPS schools, informed the ELi planning and investments.

DCPS took steps over the past several years to introduce technology in ways that helped prepare for the ELi system-wide model. DCPS began implementing and evaluating blended learning tools in 2012, developing a model in which students spend part of their instructional time using digital tools for learning, sometimes in a station-rotation model, with a 3:1 device-to-student ratio. As DCPS ramped up toward 1:1, pilot programs were completed in 2017 through the Advancing Innovation Cohort and the Verizon Digital Promise initiative, together serving seven middle schools. Pilot schools received intensive planning support, professional development, and logistical support, and all saw increases in PARCC schools at the end of the first pilot year. The pilot yielded a large cache of implementation resources and even more importantly, a group of experienced teachers and school leaders who continue to shape technology strategy at DCPS. DCPS continues to advance innovative models to drive student growth and academic achievement, reinforcing a Michigan State University research study that found thoughtfully incorporating technology into instruction has the potential to improve student outcomes across all subject areas.

As we deploy devices across all schools, DCPS will continue to leverage feedback from our families, students, and educators. We believe that insights from these efforts, along with regular touchpoints with school leaders and staff, will help to ensure ELi's success.

Recent History of Technology Initiatives in DC Public Schools

Implementation of Blended Learning — 2012/13

1:1 Implementation @Thomson ES — 2014

1:1 Take-home Deployment w/ Kajeet Hotspots @Browne EC — 2015

VILS 1:1 Take-home Deployment w/ LTE @CHEC, Hart MS, Truesdell EC — 2016

AIC 1:1 Implementation @Jefferson MS, Johnson MS, McKinley MS, McKinley Tech HS, LaSalle-Backus EC — 2017

ELi — 2018/2019

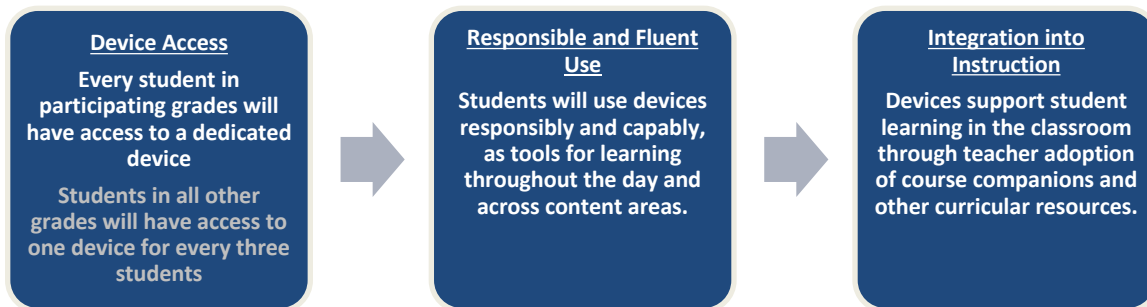## Our Vision for Technology Integration with the DCPS Curriculum

A Capital Commitment

In our strategic plan, A Capital Commitment 2017-2022, DCPS committed to ensuring that all our schools provide rigorous and joyful learning experiences in a nurturing environment every day. In order to achieve the ambitious goals outlined in the Capital Commitment strategic plan by 2022, we center our work around three priorities: 1) Ensuring there are great schools in every neighborhood at every grade level; 2) Supporting a culture of equity and transparency in our work; and 3) Preparing every student for post-secondary success.

Specifically, toward DCPS' goal of every student graduating prepared for college, career, and life, ELi empowers scholars and educators to infuse 21st-century technology inside and outside the classroom. ELi will provide support for social-emotional learning by helping our students develop self-management and ensure they understand responsible use of technology.

ELi Theory of Action

At DCPS, our approach to technology is learner centered and incorporates research-based best practices to ensure that students use technology responsibly and fluently, leading to higher levels of learning and engagement. We believe that the critical success of the ELi depends on three key measures:

Device Access	Responsible and Fluent Use	Integration into Instruction
Every student in participating grades will have access to a dedicated device	**Students will use devices responsibly and capably, as tools for learning throughout the day and across content areas.**	**Devices support student learning in the classroom through teacher adoption of course companions and other curricular resources.**
Students in all other grades will have access to one device for every three students		

We will track our progress toward these goals through the following measures of success:

Device Access	Responsible and Fluent Use	Integration into Instruction
• Annual school device inventories (Hayes TIP-web) compared to enrollment • Equipment maintenance and repair requests (RemedyForce) will support contingency planning to ensure students have access to ample working devices.	• Every DCPS school will offer Digital Citizenship courses to students. • Students and families will sign Student Acceptable Use Agreements acknowledging their responsibilities and potential consequences for not following rules under DCPS discipline policies.	•Each year, at least 90% of teachers of core content in grades participating in ELi will participate in ELi professional learning opportunities and as a result, 95% of student in grades participating in ELi will utilize the DCPS Equitable Digital Tools. • We will also assess the impact of technoloy through Ssudent work sampling through professional learning communities of practice (ongoing).

In addition to these measures, we will continue to gather feedback from our stakeholders through surveys of students, families, teachers and staff, and a new DCPS digital technology advisory group.

ELi Technology Integration Strategies

The DCPS Office of Teaching and Learning (OTL) provides educators with curricular resources and academic programs to ensure rigorous and joyful learning experiences for every student. Over the next three years, OTL will focus on three key strategies to enhance the learning experience through the thoughtful integration of technology in DCPS curricula.

1. **Empowered Learner Models**. The Empowered Learners Framework highlights eight, research-based[1] technology-supported instructional strategies embedded in the DCPS curriculum:

Empowered Learner Models	
Close Reading Modules	**Interactive Notebooks**
Use Office 365's Class Notebook and Immersive Reader feature to support students in the close reading process.	Use Office 365's Class Notebook to create interactive notebooks with differentiated individual and collaborative workspaces. Distribute editable and writable course handouts and resources in real‑time.

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[1] The models support teaching and learning with technology across the content areas as well as the 4Cs of 21st Century Education (Collaboration, Communication, Critical Thinking, Creativity), Social-Emotional Academic Development (SEAD), Universal Design for Learning (UDL), and the International Society for Technology in Education (ISTE) Student Standards.

Discussion Forum	**Student Publication and Presentation**
Use the Canvas discussion feature to allow students to engage in ongoing online discussion activities.	Use Kidblog or Office 365 tools (e.g. Sway and PowerPoint) to publish Cornerstone and curricular performance tasks for authentic audiences.
Differentiated Support	**Content P(R)eview**
Use Canvas features (e.g. Pages, Mastery Pathways, Assignments, and Quizzes) or Office 365 Class Notebook distribution features to create differentiated content and tasks.	Use PlayPosit or Office 365 PowerPoint to create new or augment existing videos with embedded checks for understand to preview and review content.
Real-Time Formative Assessment	**Interactive Concept Mapping**
Use browser-based SMART Learning Suite apps and Office 365 Forms to facilitate high-engagement, real-time formative assessment activities.	Use browser-based SMART Learning Suite apps to organize, manipulate, sort, and generate criteria for concepts to represent knowledge and understanding.

For example, technology amplifies the power of the **Close Reading** model by allowing students learning English to get on-the-spot translation of unfamiliar vocabulary. In **Discussion Forums**, teachers can amplify the power of Academic Seminars (structured face-to-face discussions) through digital forums, providing students multiple ways to participate and respond to others. DCPS is training teachers through ongoing, on-demand and in-person opportunities to leverage these models in the classroom.

2. **Equitable Digital Tools**. In support of ELi, DCPS provides critical technology tools that are freely available to every student and teacher in every DCPS school. These tools support the Empowered Learner Models. Having a unified and dependable suite of tools means that curricular resources, professional development, and student training can all be built around shared functionality. Students moving from school to school can pick up where they left off, already at ease with tools in use district-wide and even able to access their class work and Cornerstones products from prior schools. Some examples of Equitable Digital Tools include Office 365, Canvas, SMART Learning Suite, KidBlog, Playposit, and Adobe Creative Cloud.

3. **Digital Citizenship**: All students need digital citizenship skills to participate fully in their communities and make smart choices online and in life. DCPS partnered with Common Sense Education, creators of award-winning K–12 Digital Citizenship Curriculum. The DCPS Digital Citizenship program includes professional development and instructional resources for teachers, six targeted lessons per year for students, and opportunities throughout the year to model and practice good digital citizenship

through regular coursework. The Student Technology Responsible Use Agreement codifies and consolidates for students, teachers, and families, the expectations around digital citizenship behaviors (See Attachment C).

Achieving the Vision: Empowered Learners

1. **Teacher Professional Development**: Teachers need to be supported in integrating technology and instruction, and initial levels of comfort and skill vary from classroom to classroom. DCPS is designing professional development for ELi that will offer an increasing portfolio of face-to-face, online facilitation, and on-demand professional development that is differentiated to the needs of each educator:
   - **Education Technology Specialists**: Professional development will be managed by a team of five Educational Technology Specialists (ETS), each assigned to support specific schools as part of the DCPS Cluster Support Model. ETSs will offer regular professional development for teachers to support technology integration tailored to each content area, including after-school sessions (Tech Tuesdays/Thursdays), and in-school meetings and coaching sessions.
   - **District-wide content-specific PD:** DCPS will seamlessly integrate ELI Framework instructional models into content-area professional development (PD) for teachers and staff, including PD Days and job-embedded trainings, so that teachers can learn best practices for implementing the research-back content strategies they are learning.
   - **Course Companions**: Teachers will also be supported by a rich cache of student-facing curricular resources called Course Companions. The DCPS Curriculum is being augmented by Canvas Courses and Office 365 Class Notebooks, pre-loaded with student readings, handouts, and images from the curriculum, as well as resources for differentiating and supporting English Language Learners and students with special needs. Course Companions

will be developed to align with the three-year device distribution plan (grades 3, 6, 9, then grades 4, 7, and 10, and finally grades 5, 8, 11, and 12).

- **Certifications**: DCPS is developing certification opportunities, including the Microsoft Innovative Educator certification, so that teachers can be recognized for their expertise and serve as resources for their school community. DCPS has already certified 38 Library Media Specialists and will provide regular certification support and tracking starting in the summer of 2020.

2. **Student Digital Citizenship & Responsible Use.** DCPS is providing student digital citizenship training for every grade that will help students understand their place in the digital landscape, the importance of their digital footprint, and the rights and responsibilities they have as ethical and empowered technology users. This training is paired with a student acceptable use agreement that sets clear expectations to guide students as they apply their digital citizenship lessons during everyday instruction.

- **Student Digital Citizenship**: Students are receiving Digital Citizenship lessons published by Common Sense Media. These lessons teach students to be safe and responsible online.
- **Student Acceptable Use Agreement**: This agreement codifies and consolidates, for students, teachers, and families, the expectations around digital citizenship behaviors.
- **Take Home Policy**: Students will not take devices home, but they will be responsible for the use of the devices in schools. DCPS will gather stakeholder feedback on the device take-home policy in year two (SY20-21).

3. **Devices, accessories, and inventory management.** DCPS is preparing for the implementation of the Empowered Learners Initiative through investments in devices, accessories, and school inventory management.

   a. **Student Devices (1:1).** A cornerstone of ELi is a three-year investment in moving all schools to one device per student in grades 3-12. DCPS selected the **Microsoft Surface Go** as the student device for this initiative. In selecting a device for students, DCPS focused on providing students with equitable access to state-of-the-art technology and amplifying the DCPS Curriculum and Cornerstones that already position students as thinkers, creators, and advocates. The Surface Go offers key features that meet the needs of our learners, including a compact footprint, a tough, damage-resistant screen, keyboard and case, an inking stylus, a world-facing camera, the ability to use the device on- or offline, and a long battery life.

   b. **Accessories.** In addition, our investment in student devices includes accessories that are critical for schools to manage devices including device cases and carts to store and move devices between classrooms.

   c. **Classroom Technology**: Interactive boards and other technology in classrooms across the district play a crucial role in ELi, because they promote important practices such as student presentations, collaborative inquiry, display of student multiple student solutions and approaches, and teacher modeling of responsible and fluent technology use. In support of ELi, DCPS will begin annual upgrades of this technology so that teachers can leverage these tools. In FY21, the DCPS capital budget provides a multi-million-dollar investment to refresh interactive boards. The technology modernization initiative will be a multi-year, phased approach to refresh hundreds of interactive boards in the district each year.

   d. **Device Inventory Management**: In 2018, DCPS deployed an asset management system called Hayes TIPWeb-IT and conducted audits during SY18-19 and SY19-20 to ensure schools can track all devices in their building. DCPS is supporting this work through the provision of a stipend to identified ELi points of contact (POCs).

4. **Technical Support**: Technology support is critical for the success of this initiative. DCPS and our partners at Office of the Chief Technology Officer (OCTO) are committed to ensuring schools are prepared to leverage new technology for enhanced teaching and learning. DCPS and OCTO partner to provide technicians for schools, so that our educators can focus on teaching and learning. Our largest schools (middle and high schools) have dedicated technician support and the remaining schools share technicians. In our FY21 budget, DCPS is enhancing technical support for schools as they take on responsibility for more technology.

5. **Student Safety and Device Security**: Mirroring best practices developed in DCPS and national standards, DCPS will take a multi-pronged approach to student safety and security, using a mix of human and digital strategies to monitor student and device use and location, and help students develop the skills they need to be safe and secure in any technology-enhanced situation. Together, these strategies put guardrails in place to protect and support students as they develop their own capacity as safe and responsible technology users.
   - **Digital monitoring and content filtering**: As required by Children's Internet Protection Act (CIPA), DCPS is required to protect students from online threats, block access to inappropriate content, and monitor Internet use by minors on school networks. DCPS has implemented a content filtering tool called *iBoss* that allows student access only to approved internet content. In addition, DCPS monitors student content using a tool called *Gaggle* that automatically flags suspected threats of harm to self or others and use of offensive speech and other concerning behaviors. Teams across Central Office collaborate closely to evaluate the automatic alerts to see if they resulted from legitimate student research or advocacy projects. If the alert is judged to be concerning, the Office of Teaching & Learning (OTL) notifies appropriate offices and school personnel, and actions are taken to assure student health, safety, and responsible technology use. Intervening offices depend on the type of content and may include: OTL, Information Technology, Social Emotional Learning, School Security, and School Mental Health.
   - **Teacher Classroom Management Tools**: Teachers will have a classroom management tool called *Impero* that help them differentiate learning for students and manage the ELi technology-enhanced learning environment.

6. **Digital Infrastructure**: The effective use of digital technologies is supported by a network, as well as devices and equipment, tailored to serve future-ready learning and administration needs. Over the last three years, DCPS invested in regular upgrades to our infrastructure so that all schools have access to a high-speed, reliable, and secure network. In FY19, DCPS completed a multi-year internet upgrade initiative implementing high-speed internet (1Gb/sec) in 100 percent of our schools, ensuring robust wireless coverage throughout the buildings. In FY20, we are investing an additional $1.5 million in upgrading nine (9) schools to ensure they continue to offer reliable internet coverage. In addition, our partners at OCTO provide 24/7 monitoring of wireless networks and issue detection. In FY21, we expect up to 18 schools will receive network upgrades and will continue to make investments in future years.
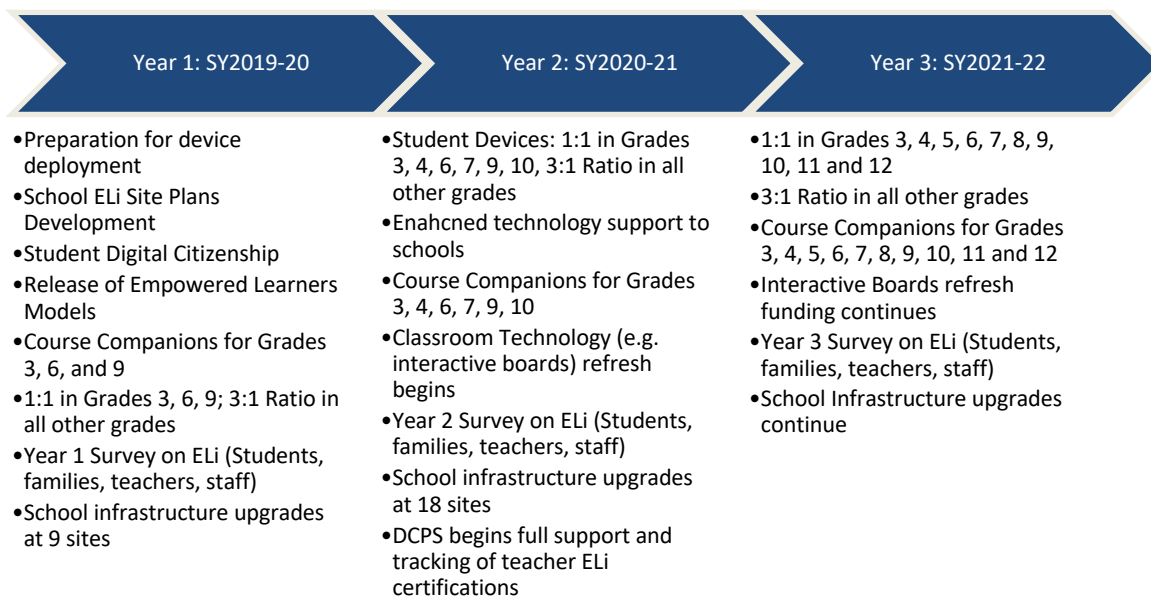
Ensuring Year 1 Readiness

DCPS began this initiative by working to ensure that all schools are prepared for Year 1 of ELi. Since it represents a significant investment in our schools and a shift in core practices, it was critical to prepare thoughtfully and well at the outset. In addition to ongoing and on-demand professional development, key readiness activities included:

1. **System-Wide Preparation:** DCPS and OCTO initiated joint planning efforts to ensure that as devices are delivered to schools, all professionals who support ELi feel fully prepared and have the resources and tools they need to address challenges they may face during the first year of implementation.

2. **School Leader Site Planning:** In summer 2019, school leaders started preparing for ELi implementation by developing site plans detailing how the devices will be managed. Each school was required to support a Site Logistics Plan prior to receiving devices. As part of site planning, each school identifies a logistics lead who attends to issues such as daily device distribution, device inventory, damage, loss, and theft (See Attachment A. Site Planning Guidebook). Logistics POCs receive training on inventory control and device management.

3. **Teacher First Day Packages**: Teachers receive a "First Day" package with student-facing videos on device use and care and lesson plans addressing the Student Acceptable Use Agreement.

4. **Student Preparation**: Students are receiving Digital Citizenship lessons published by Common Sense Media, DCPS is requiring all schools to complete a digital citizenship lesson and sign an acceptable use pledge before they are assigned a device.

Empowered Learners Initiative Technology Detailed Roadmap

Year 1: SY2019-20	Year 2: SY2020-21	Year 3: SY2021-22
• Preparation for device deployment • School ELi Site Plans Development • Student Digital Citizenship • Release of Empowered Learners Models • Course Companions for Grades 3, 6, and 9 • 1:1 in Grades 3, 6, 9; 3:1 Ratio in all other grades • Year 1 Survey on ELi (Students, families, teachers, staff) • School infrastructure upgrades at 9 sites	• Student Devices: 1:1 in Grades 3, 4, 6, 7, 9, 10, 3:1 Ratio in all other grades • Enahcned technology support to schools • Course Companions for Grades 3, 4, 6, 7, 9, 10 • Classroom Technology (e.g. interactive boards) refresh begins • Year 2 Survey on ELi (Students, families, teachers, staff) • School infrastructure upgrades at 18 sites • DCPS begins full support and tracking of teacher ELi certifications	• 1:1 in Grades 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 • 3:1 Ratio in all other grades • Course Companions for Grades 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 • Interactive Boards refresh funding continues • Year 3 Survey on ELi (Students, families, teachers, staff) • School Infrastructure upgrades continue

Sharing your Feedback

We will continue to shape our plan and refine implementation strategies with the support of our stakeholders, supported by the launch of an ELi technology advisory group that will be comprised of a diverse set of stakeholders from all eight wards. To get involved with the forthcoming technology advisory group, please fill out the application here.

For more information on ELi please contacts us at ELI@k12.dc.gov.