

**Archdiocese of Philadelphia Schools
PreK - 12
Educational Technology Plan
2021 - 2026**



Archdiocese of Philadelphia Schools Educational Technology Plan

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Purpose, Vision and Objectives

Core Purpose of the Archdiocese of Philadelphia Schools

To Equip Saints for Life in this World and The Next!

Vision Statement of the Archdiocese of Philadelphia Schools

*Responding to God's call, we are the world's premier center
for the teaching mission of the Church.*

Overarching Objective of the 2021 - 2026 Technology Plan

*Leading effective technology integration to support
the next generation of leaders and saints.*

Educational Technology and 2021 - 2026 Goals

The landscape of education and educational technologies is a constantly evolving cycle of innovation and development. Responding to the needs of our students and fostering their academic growth is of utmost importance. As Catholic educators, there is the ever greater calling to foster faith within our communities. The 2021 - 2026 Archdiocese of Philadelphia Educational Technology Plan seeks to support schools with their integration of technology to support the next generation of leaders and saints.

The Archdiocese of Philadelphia Schools have responded to these evolving educational landscapes with grace and fortitude. As we look towards the next five years, school communities have the opportunity to continue fostering educational technology advancement.

The Archdiocese of Philadelphia Educational Technology Plan 2021 - 2026 includes five key areas for continued and future growth. These key areas are:

- *Technology Integration through the Triple E Framework*
- *Universal Tools for Teaching and Learning*
- *Foundations for Virtual, Concurrent, and Hybrid Learning*
- *Digital Citizenship*
- *Hardware and Device Recommendations*

Standards driven goals and supporting information are provided in this plan to help schools develop each of these pillars within their community. A summary of the actionable goals can also be found at the end of this document. To deepen the 2021 - 2026 Educational Technology Plan, schools will find three appendices to further promote educational technologies. These appendices represent key focal areas for exploration at the local school level. School communities are encouraged to create a local, personalized vision and goals around these topics.

Technology Integration through the Triple E Framework

Goal: *Through 2026, continue to integrate technology to Engage, Enhance, and Extend student learning in all grades PreK-12 through continual professional development and educator support.*

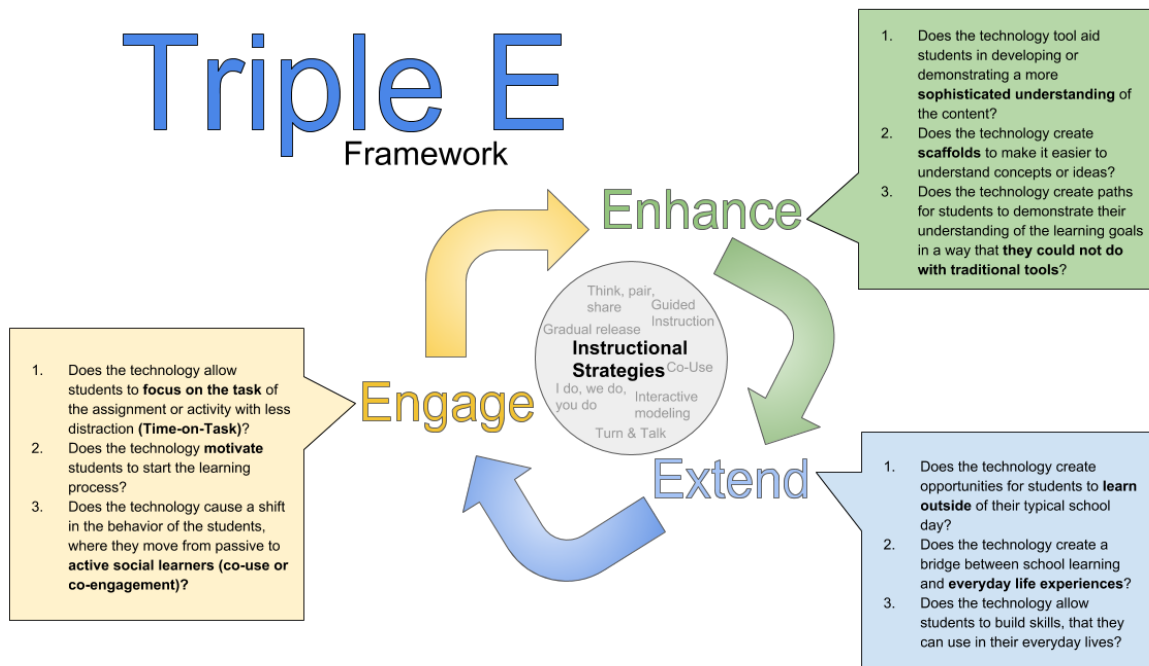
The Triple E Framework, a model of technology integration developed by Dr. Liz Kolb at the University of Michigan, places the learning goals of a lesson/unit *first*. Technology takes a supporting role to promote engagement, enhancement, and extension of the learning objectives. This framework places a keen importance on well developed, standards-aligned objectives, and high quality instruction. The Triple E Framework emphasizes quality instructional practices and student learning, not hardware, software, or specialized technologies. Technology is used as a supporting layer to Engage, Enhance, and Extend student learning.

Engagement through technology can be viewed as examining how technology is supporting students' ability to actively construct and build knowledge. The use of technology can be a motivator for students; however, educators need to be mindful that this motivation must be connected to the overall learning objective and not to the technology itself.

Enhancement considers whether the technology being used is adding value to students' learning. The goal is for educators to utilize tools that help create an understanding of the content or objective in a way that would not be otherwise possible.

Extension through technology use helps students connect their learning to the real world. Technology should support learners by creating a bridge between curriculum content and their everyday lives. This supports educators in making connections to soft skills like collaboration, as well as, connections to careers and real-world problems.

Below, a model of the Triple E Framework is presented to demonstrate the three "E" concepts and their interconnectedness.



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The framework recognizes that not all lessons or units may employ all three “E’s” at once when placed into practice. Utilizing the [Triple E Framework rubric](#)² educators can assess in a concise way the strengths and weaknesses within each experience. This rubric translates to a scale that helps determine if the technologies being used are an appropriate fit with the learning objective. A lesson where the objective and technology are determined not to be a match does not mean the lesson is poor, rather that the technology used isn’t supporting the objective in a meaningful way.

The Triple E Framework aligns with other recommended standards and frameworks within the Archdiocese of Philadelphia Schools. This model is in alignment with, and recommended by, [International Society for Technology in Education \(ISTE\) standards](#)³ for Educators, Educational Leaders, and Students. While TPACK, SAMR, and TIMS are all alternative models for examining technology integration, the Triple E Framework provides a more practical approach. This makes it a more appropriate fit for daily school utilization,

¹ "Triple E Framework." 9 Dec. 2019, <https://www.tripleeframework.com/>. Accessed 30 Mar. 2021.

² "Triple E Printable Rubric for Lesson Evaluation - Triple E Framework." 9 Dec. 2019, <https://www.tripleeframework.com/triple-e-printable-rubric-for-lesson-evaluation.html>. Accessed 30 Mar. 2021.

³ "ISTE Standards." <https://www.iste.org/standards>. Accessed 30 Mar. 2021.

though the additional models of technology integration are welcomed as another layer of support. Additionally, the Triple E Framework aligns with the Rigor and Relevance Framework due to the emphasis on sound instructional practices.

There are numerous benefits in the utilization of the Triple E Framework. For leaders, this creates a concrete model of technology integration that is both comprehensible and practical. The rubric to assess lesson or unit plans is concise for leaders to use in classroom walkthroughs or formal observations. Further, it makes evident areas for improvement. With support, teachers can grow in their effective utilization of technology in the classroom while celebrating their pedagogical successes.

For classroom educators, the Triple E Framework can be utilized as a self reflection tool to examine their own personal effectiveness and growth. Educators are able to see where the technology utilized may or may not be adding meaning, rigor, or relevance to the overall objective. This framework can be used to assess whether a web tool, app, or software program will help support student learning objectives. This makes the Triple E Framework a useful tool in supporting the integration of new technology by providing an opportunity for meaningful reflection.

The many benefits of utilizing the Triple E Framework and the connection to other respected, high quality pedagogical models makes the Triple E Framework an appropriate model of technology integration for the Archdiocese of Philadelphia Schools. Therefore, schools are encouraged to integrate the language and concepts of this framework as a means of examining and furthering their own technology integration. This will ultimately support effective technology integration to deepen student learning throughout all grade levels and content areas.

Universal Tools for Teaching and Learning

Goals:

- *By 2022, schools will plan for comprehensive professional development and educator support to meet baseline technology skill sets for teaching and learning.*
- *Through 2026, continue to utilize school appropriate technologies, such as Google Workspace for Education, LMS, and SIS in alignment with the Office of Catholic Education.*

Over the past five years, the Archdiocese of Philadelphia Schools have made immense progress in the utilization of online tools in support of the classroom curriculum. This progress is commendable and school communities should continue to expand and deepen their experiences. Doing so provides teachers and students with a diverse technology skillset that can be applied in a variety of technological applications and experiences.

It is recommended that school communities, both elementary and secondary, continue to utilize Google Workspace for Education as the primary cloud-based processing platform for both teachers and students. Google Workspace for Education, formerly known as G Suite for Education and Google Apps for Education (GAFE), offers schools an array of tools that support professional educator practices and student application of technology. These tools include, but are not limited to, Gmail, Google Drive, Google Docs, Google Meet, and Google Classroom.

Presently, Google offers several tiers to the Google Workspace for Education platform⁴. At minimum, schools are recommended to utilize the “Google Fundamentals” edition of the Google Workspace for Education platform. This edition is free for schools and offers all the baseline tools and features for building robust digital resources. This is a continuation of the goal set in the 2016 - 2020 Educational Technology Plan. Schools are able to upgrade the Google Workspace for Education experience through several options and price points. The AoPTech team and the Office of Catholic Education can

⁴ "Google Workspace for Education Overview | Google for Education."
<https://edu.google.com/products/workspace-for-education/>. Accessed 30 Mar. 2021.

support schools in the decision making process regarding the need and selection of platform enhancements.

Additionally, school communities are encouraged to utilize system-wide platforms as recommended by the Office of Catholic Education. These platforms may include, but are not limited to, Student Information Systems (SIS) or Learning Management Systems (LMS). The Office of Catholic Education and the AoPTech team will consistently evaluate the effectiveness of these universal systems and offer support to the local school communities.

While it is important for schools and educators to utilize the universal system in place for the Archdiocese of Philadelphia Schools, many high quality web tools and applications exist to help support student engagement, enhancement, and extension. Presented below is a sample selection of these respected tools partnered with the pedagogical strategy supported. While this is not an all encompassing list of tools available in the educational technology market, this maxtrix⁵ offers educators and leaders a snapshot of well established tools to consider for integration into the curriculum.

Common Instructional Strategies	Sample Digital Tools
Class Discussion and Interactive Presentation	Google Meet, Zoom, Nearpod, Peardeck, Padlet, Seesaw, Google Classroom, Schoology, Google Slides, Flipgrid, Jamboard
Content Creation and Screencasting	Screencastify, Loom, Screencast-o-matic, Educreations, Nearpod, Peardeck, Google Workspace, Book Creator, WeVideo, Canva, Buncee, Animoto
Formative Assessment and Skills Reinforcement	Kahoot, Quizlet, Quizizz, Boom Cards, Blooket, Nearpod, Peardeck, Go Formative, Google Forms, Socrative, Mentimeter, Poll Everywhere,

⁵ Kolb, Liz. "Digital Tools for Synchronous and Asynchronous Learning." *Triple E Framework*, University of Michigan, 2020, docs.google.com/document/d/18hV2ptRZ1Q8QrWkY2zg5j3Mp9aJ6LIRWLNsAC1KOVm8/edit.

	IXL
Digital Collaboration	Google Workspace, Flipgrid, Padlet, Collabrify, Jamboard, Boomwriter
Literacy Development	Newsela, Commonlit, Epic, Bookopolis, Tween Tribune, Actively Learn

In support of the goal to continue utilization of digital tools for instructional and professional practices, educators and leaders need a strong baseline technology skillset. As new tools or educational challenges arise, educators will feel more confident and prepared to integrate technology.

Presented below is a checklist of baseline technology skills for all Archdiocese of Philadelphia Schools educators. Schools are encouraged to utilize this list as an informal assessment of local strengths and areas of growth. Schools are encouraged to include any standard tools and/or skills deemed to be of localized importance in addition to this list. Additional skills may be determined through the examination of the [ISTE Standards for Educational Leaders and Educators](#). As the educational landscape and technology both change rapidly, communities should strive for continual growth.

ISTE Standards Strands ⁶	Minimum Baseline Skills
Learner	<ul style="list-style-type: none"> <input type="checkbox"/> Finds and evaluates resources to support curriculum, student growth, and personal professional development <input type="checkbox"/> Participates in a variety of learning opportunities around technology skills and integration <input type="checkbox"/> Sees the importance and value of lifelong learning <input type="checkbox"/> Fosters a growth mindset around technology for

⁶ "ISTE Standards for Educators | ISTE." <https://www.iste.org/standards/for-educators>. Accessed 30 Mar. 2021.

	<p>themselves and others</p>
Leader	<ul style="list-style-type: none"> <input type="checkbox"/> Supports colleagues and other members of the community in their educational technology journey <input type="checkbox"/> Models for students ethical usage and willingness to learn <input type="checkbox"/> Understands and supports the Responsible Use Policy of the AoP <input type="checkbox"/> Understands and utilizes the Triple E Framework for Technology Integration
Citizen	<ul style="list-style-type: none"> <input type="checkbox"/> Obtains a working knowledge of copyright laws and places into practice <input type="checkbox"/> Models ethical technology usage <input type="checkbox"/> Understands and promotes basic online safety <input type="checkbox"/> Leads students in understanding digital citizenship
Collaborator	<ul style="list-style-type: none"> <input type="checkbox"/> Utilizes email appropriately to communicate with all stakeholders (colleagues, leadership, parents, and students where appropriate) <input type="checkbox"/> Utilizes Google Workspace and/or LMS tools for collaborative documents and presentations with students and colleagues <input type="checkbox"/> Collaborates effectively with colleagues, administrators, and students using available technology
Designer	<ul style="list-style-type: none"> <input type="checkbox"/> Uses Google Workspace and/or Microsoft Office to create documents, presentations, and graphics <input type="checkbox"/> Imports files, images, and videos into Google Drive or LMS <input type="checkbox"/> Creates, manipulates, and displays text and/or graphics

	<ul style="list-style-type: none"> ❑ Develops standards aligned lesson or unit plans that integrate technology ❑ Utilizes a variety of web tools to support instructional strategies
Facilitator	<ul style="list-style-type: none"> ❑ Accesses and navigates the web effectively ❑ Manipulates a variety of file types (documents, presentations, audio, picture, PDF) ❑ Develops and reply to online posts and discussions within Google Classroom, Schoology or LMS ❑ Posts assignments within Google Classroom, Schoology, or LMS ❑ Provides students with baseline support in navigating online tools ❑ Leads video conferencing opportunities via Google Meet or Zoom ❑ Utilizes school student information system
Analyst	<ul style="list-style-type: none"> ❑ Determines the authenticity of a website ❑ Determines the suitability of content/tools for instructional use ❑ Informs students on the methods of evaluating online content ❑ Examines and identifies assessment performance disparities among students and respond appropriately ❑ Utilizes the appropriate online resources to examine and compare student assessment data

In addition to the baseline skills noted above, it is also encouraged that schools consider Google Educator Level 1 certification for all faculty members. While this is not a specific requirement of the 2021 - 2026 Educational Technology Plan, it is a worthwhile consideration for local school communities. Google Educator Level 1 certification supports many of the standards and skills included within the baseline.

Educational leaders should utilize this informal assessment to develop a plan for ongoing professional development. This professional development can be utilized in a variety of models from large group instruction to individual coaching. However, it is imperative that skills are developed and reinforced over time, just as educators strive to do for students. Teacher champions, online webinars, the county intermediate units, the AoPTech team, and the Office of Catholic Education are providers of professional development for school communities.

Foundations for Virtual, Concurrent, and Hybrid Learning

Goal: *By 2025, schools will have developed a plan to incorporate virtual learning within extracurricular activities or academic courses.*

The Coronavirus pandemic has challenged our society in many ways and within the field of education is no exception. Educators and leaders across the country rapidly redefined our educational environments. This required a swift pivot to fully virtual learning settings, and subsequently, concurrent and hybrid models. Educators should be commended for their hard work and dedication as they kept the students of the Archdiocese of Philadelphia learning throughout the pandemic.

As schools transition to more “traditional” models of education, educators do not need to abandon the skills and instructional strategies gained throughout our pandemic experience. Rather, schools are encouraged to build upon this foundation and reimagine how “school” reaches beyond a physical building. In this five year cycle of the 2021 - 2026 Educational Technology Plan, school communities are challenged to explore the integration of any ongoing virtual, concurrent, or hybrid opportunity for their community. This may look and feel different in each unique school community. For example, elementary schools may consider adding a virtual option to an extracurricular activity or club for students with after school transportation conflicts. An ongoing learning opportunity, such as a shared content area like Honors Math or foreign language course, can be explored. At the secondary level, shared courses for unique content areas or additional advanced placements options would enhance each school’s offerings.

As school communities consider how to utilize the lessons learned during the pandemic and can now support more robust academic or extracurricular offerings, components of high quality environments can be explored. First, it is important to define the common terminology so that all school stakeholders begin with a common understanding. Virtual learning takes the common definition wherein the learner receives the instruction in a fully web based

environment either synchronously (live) or asynchronously (recorded). Students may or may not be in the same physical location as the educator. Concurrent classrooms utilize both in-person instruction *at the same time* as remote students. This simultaneous model can be challenging for educators and students alike, but offers the opportunity for more synchronous instruction. Hybrid or blended learning settings alternate the physical location of students and/or their participation in synchronous or asynchronous instruction.⁷

The AoPTech team recommends that schools utilize the *Universal Tools for Teaching and Learning* of the 2021 - 2026 Educational Technology Plan for recommendations on high quality tools for all instructional settings. Integrating these tools consistently throughout the curriculum, regardless of the instruction model, will help the community be prepared to respond to changes. Additionally, schools should make use of the procedures or protocol outlined by the Office of Catholic Education. Such guidance may be provided for flexible instructional days in the case of inclement weather or limited closures, as well as, ongoing alternative instructional models. Consideration for local school expectations should be consistently communicated with students and parents throughout the year. The school handbook provides a centralized place for local school expectations and procedures to be referenced.

Several common traits of successful virtual, concurrent, and hybrid learning opportunities have been found to help result in a robust experience.

- Well developed, standards-aligned objectives - It is imperative that the instruction delivered to students represents strong ties to the Archdiocese of Philadelphia Schools curriculum. This maintains the integrity of curriculum and promotes student learning goals. While the pedagogy and instructional strategies may be different than those in fully face-to-face settings, making the course materials rigorous and relevant sets a strong foundation in alternative settings.⁸
- Blending synchronous and asynchronous instruction - Educators should develop instruction so that there is a blend of both synchronous

⁷ "The Concurrent Classroom: Using Blended Learning Models to" 1 Sep. 2020, <https://catlintucker.com/2020/09/concurrent-classroom-blended-learning-models/>. Accessed 31 Mar. 2021.

⁸ "5 Teaching Strategies of Award-Winning Online Instructors | Edutopia." 17 Apr. 2020, <https://www.edutopia.org/article/teaching-strategies-award-winning-online-instructors>. Accessed 31 Mar. 2021.

instruction, where all students are learning together with the teacher in the moment, and asynchronous instruction. The blend of such offers several benefits. Educators can pre record content and utilize various multimedia to support direct instruction of concepts, giving students the ability to replay and reinforce content. Further, it allows educators to have the opportunity to work with small groups or individual students in conferencing formats. Bringing students together for synchronous instruction supports the community of the classroom.⁹

- Collaboration - With the required shift to virtual settings, many educators and students felt the loss of collaborative work as an instructional strategy. Thus it is important to be mindful that collaboration plays an integral part of learning and can be accomplished in virtual, concurrent, and hybrid settings. Small group discussions can be shifted online in the selected LMS to promote participation. Breakout rooms allow for collaboration during synchronous sessions. Students can also utilize video conferencing platforms in partnership with other online tools to participate in collaborative projects and activities.¹⁰
- Reflection and Feedback - Students need the opportunity to reflect on their learning, whether face-to-face or online. This includes providing consistent, meaningful feedback for students. Reflection exercises, individual student coaching, and open “office hours” for students to connect with educators and continue their learning growth.¹¹
- Social emotional awareness - There has been a major shift in education to promote the importance of Social Emotional Learning (SEL). Educators are important figures in the lives of students and have the unique ability to promote soft skills in the classroom. Educators can utilize this awesome responsibility to promote wellbeing in themselves and students. This can include being culturally aware of the home lives of our students, teaching

⁹ "The Concurrent Classroom: Using Blended Learning Models to" 1 Sep. 2020, <https://catlintucker.com/2020/09/concurrent-classroom-blended-learning-models/>. Accessed 31 Mar. 2021.

¹⁰ "Strategies for Promoting Student Collaboration in a Distance" 22 Sep. 2020, <https://www.edweek.org/teaching-learning/opinion-strategies-for-promoting-student-collaboration-in-a-distance-learning-environment/2020/09>. Accessed 31 Mar. 2021.

¹¹ "5 Teaching Strategies of Award-Winning Online Instructors | Edutopia." 17 Apr. 2020, <https://www.edutopia.org/article/teaching-strategies-award-winning-online-instructors>. Accessed 31 Mar. 2021.

awareness and empathy, and understanding resources to provide families with the mental, emotional support needed.¹²

¹² "Future of Education Report - Future Design School."
<https://www.futuredesignschool.com/future-of-education-report>. Accessed 31 Mar. 2021.

Digital Citizenship

Goal: *Through 2026, continue to teach yearly digital citizenship lessons as developed and/or recommended by the Office of Catholic Education and AoPTech for all grades PreK-12.*

Digital citizenship and the development of our young digital citizens has a place in every classroom, at every grade level. As educators integrate technology throughout the curriculum, students need to have a foundation in ethical thinking and decision-making. It is often incorrectly presumed that because students use technology in their personal time that they are making safe choices in their digital life, or that they have positive digital role models to look to for guidance. However, digital citizenship is a skill that needs to be explicitly taught throughout the PreK-12 curriculum while also being modeled by educators and educational leaders.

As teachers, administrators, and staff model digital citizenship for our children, many resources are available to guide our teaching. First and foremost, our Catholic faith provides an unique opportunity to guide our students' digital identity. The use of faith to promote digital citizenship reaches across grade and curriculum areas to develop our students into responsible global citizens as they are the next generation of leaders and saints.

At the elementary level, the utilization of the [Common Sense Media Digital Citizenship Curriculum](#) for use in grades PreK/K-8 is recommended. This curriculum provides high quality, pre-made lessons and materials for educators to utilize, as well as, bilingual materials. AoPTech recommends that school communities collaborate to select when these lessons will be implemented. Lessons are recommended for use by all teachers. The inclusion of the Digital Citizenship curriculum will be measured in the yearly Elementary Technology Inventory survey.

At the secondary level, AoPTech has remixed the Common Sense Media resources to fit the needs and values of the Archdiocesan High Schools. These lessons are encouraged to be implemented within Digital Citizenship Week (typically occurring in the fall) or within the first quarter. The amended

curriculum includes introductory school presentations, two key lessons per grade level, and parent presentations. These materials, as well as any updates, can be found on the [AoPTech website](#) and within the Secondary Educators Portal. Completion of the Secondary curriculum will be measured yearly through a Digital Citizenship survey.

The Responsible Use Policy (RUP) for the Office of Catholic Education and the Archdiocese of Philadelphia Schools should also be consulted for details regarding digital citizenship and the impact of technology on students. The Elementary Technology Curriculum for the Archdiocese of Philadelphia Schools addresses digital citizenship instruction in the classroom. The students, faculty, administrators, staff, and school community are granted the privilege of using the computer hardware and software peripherals, and electronic communication tools including the Internet. With this privilege comes the responsibility for appropriate use. In the Archdiocese of Philadelphia, we use information and technology in safe, legal, and responsible ways. The Responsible Use Policy for Technology applies to all students, faculty, administrators, staff, volunteers or community members allowed access to school technology resources. In some cases, outside or personal uses of technology may be applicable under this policy. A copy of the RUP can be found [here](#).

Other exemplary resources for digital citizenship curriculum and best practices include, but are not limited to:

- [ISTE Standards](#)¹³ for Students, Teachers, Administrators, and Coaches all include objectives for digital citizenship to guide educators in their own personal practices and those with students.
- [NetSmartz](#)¹⁴ provides a library of K-12 resources for teachers, students, and parents from the National Center for Missing and Exploited Children. Videos, interactive games, and presentations are leveled for developmentally appropriate use in the classroom.

¹³ "ISTE Standards." *Standards*. ISTE, 2016. Web. 04 Apr. 2016.

¹⁴ "NetSmartz." *NetSmartz*. National Center for Missing and Exploited Children, 2016. Web. 04 Apr. 2016.

- [Edutopia](#)¹⁵ offers a wealth of information on best practices in digital citizenship and media literacy. Articles, tips, and resources are all submitted by teachers and are updated consistently. Additionally, there are articles aimed at parents to foster school to home communication.

¹⁵ "Digital Citizenship: Resource Roundup." *Edutopia*. Edutopia, 21 Oct. 2015. Web. 04 Apr. 2016.

Hardware and Device Recommendations

Goals:

- *By 2023, school communities will develop specific plans for technology refreshment cycles for hardware, devices and building infrastructure.*
- *Through 2026, continue to plan and execute device procurement to support 1:1 devices for in-person and/or virtual settings in all grade levels PreK-12.*

As the need to support in-person, concurrent, and hybrid learners with technology grows, school communities need to be keenly aware of the hardware available to educators and students. Communities must also consider continual maintenance and upgrades for network infrastructure. Strong network infrastructure is imperative for supporting the effective integration of technology, as well as, the functionality of hardware. The AoPTech team, both the Instructional Technology Coaches as well as the Senior IT techs, are free resources available to help evaluate existing school infrastructure as well as provide guidance for future maintenance.

In support of the continued growth of hardware in Archdiocese of Philadelphia Schools, the 2021 - 2026 Technology Plan device recommendations and refreshment cycles are presented to help guide the conversation for school communities. In this conversation, communities should examine the current systems in place for compatibility, the needs of educators and students, budgetary considerations, refreshment plans, and the local vision of educational technology to enhance learning outcomes. AoPTech provides a Preferred Vendors List with baseline model recommendations to help support school decision making.

Elementary Educator, Student, and School Baseline Device Recommendations

User Group	Baseline Recommendations
Educators	<ul style="list-style-type: none"> ● A robust laptop - Windows or Mac OS ● A dedicated teacher iPad for educators in a grade level that utilizes iPads as the primary student device ● Dedicated teacher Chromebook for educators in a grade level that utilizes Chromebooks as the primary student device <p>Optional, but highly encouraged:</p> <ul style="list-style-type: none"> ● Secondary external monitor ● The required cables or dongles to connect their devices
Students	<ul style="list-style-type: none"> ● PreK, Cart or Centers based with school managed iPads ● Grades K-1, one-to-one Chromebooks or iPads <ul style="list-style-type: none"> ○ Consider Touch Screen Chromebooks for ease of transition to Chromebooks ● Grades 2-8, one-to-one Chromebooks or alternative laptop ● Grades 2-8, access to cart based iPads may be considered for content creation or creative applications to support technology integration ● A Google Chrome Management License for all student Chromebooks
School-Wide	<ul style="list-style-type: none"> ● High quality digital display and/or interactive panel in each classroom <ul style="list-style-type: none"> ○ Note: Ceiling mounted & table top projectors are no longer recommended

	<p style="text-align: center;">for classroom use.</p> <ul style="list-style-type: none"> ● Printers within computer lab and/or 1 per floor ● PC or Mac based computer lab, media center, and/or STREAM lab ● Google Workspace for Education for cloud-based storage, faculty accounts, and PreK-8 student accounts ● External webcams or document cameras should be available
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In the 2021 - 2026 Technology Plan, there is a shift with Chromebooks being successfully utilized at the primary grade levels. Even the younger students need robust and compatible devices for virtual, concurrent, and hybrid learning applications. Local communities should develop plans to have technology available for all students to support in-person learning, as well as, to plan for the need to shift learning outside the physical boundaries of the building. Educator devices should be robust and sufficiently powered to support these multiple learning environments as well.

Schools should consider several enhancements to their technology program based upon the needs of their school community. Providing teachers with an additional desktop, laptop, or external monitor should be considered. Schools may adjust the primary device for students to include a more robust laptop over a Chromebook if desired. Collaborative conversations should take place regarding any additional technology materials warranted, such as green screens, 3D printers, robotics, digital cameras, tools for video conferencing or content creation. These considerations will be unique to each community and their local vision for education technology.

School communities should plan for a staggered or rolling implementation, beginning with either the most aged devices in need of refreshment or focusing first on the areas of greatest need. Administrators should consider a permanent budget allotment for technology so as to provide the funds needed for continual maintenance of both the devices themselves as well as the school infrastructure and systems.

Secondary Educator, Student, and School Baseline Device Recommendations

User Group	Baseline Recommendations
Educators	<ul style="list-style-type: none"> ● A robust laptop - Windows or Mac OS ● A dedicated teacher iPad for educators in a grade level that utilizes iPads as the primary student device ● Dedicated teacher Chromebook for educators in a grade level that utilizes Chromebooks as the primary student device ● Mounted camera systems for hybrid learning ● External monitor to support camera systems ● The required cables or dongles to connect their devices
Students	<ul style="list-style-type: none"> ● One-to-one Chrombooks or alternative laptop ● A Google Chrome Management License for all student Chromebooks
School-Wide	<ul style="list-style-type: none"> ● High quality digital display and/or interactive panel in each classroom <ul style="list-style-type: none"> ○ Note: Ceiling mounted & table top projectors are no longer recommended for classroom use. ● Printers within computer lab and/or 1 per floor ● PC or Mac based computer lab with specialized programming as fits the educational programs of the school ● Google Workspace for Education for cloud-based storage and user accounts ● External webcams or document cameras should

	be available
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All educators and students should have access to robust devices that support in-person, concurrent, hybrid, and virtual educational settings. Schools should be mindful of any software needed to support robust learning environments, though this may look differently in each local community.

Schools should consider several enhancements to their technology program based upon the needs of their school community. Providing teachers with an additional desktop, laptop, or external monitor should be considered. Schools may adjust the primary device for students to include a more robust laptop over a Chromebook if desired. Collaborative conversations should take place regarding any additional technology materials warranted, such as green screens, 3D printers, robotics, digital cameras, tools for video conferencing or content creation.

School communities should plan for a staggered or rolling implementation, beginning with either the most aged devices in need of refreshment or areas of greatest need. Administrators should consider a permanent budget allotment for technology so as to provide the funds needed for continual maintenance of both the devices themselves as well as the school infrastructure and systems.

Recommended Device Refreshment Cycle and Funding Considerations

Devices	Refreshment Cycle
Student Use iPads, Chromebooks, or Laptops	<p>Every 4 years</p> <p>*Chromebooks that have reached their “end of life” or Auto Update Expiration¹⁶ (AUE) should not be redeployed within a school environment due to diminished management capabilities.</p>
Student Use Computer Labs	Every 5-6 years, or as needed
Educator Use Laptops and iPads	Every 4 years
Interactive Displays, Panels, or Projectors	Every 8-10 years, or as needed
Printers and other Specialized Equipment	As needed

With the heavy utilization of technology by both educators and students, schools need to continually assess the condition of school hardware. Providing technology that is in good working order allows for more effective and consistent integration of technology. Therefore, as a part of the 2021 - 2026 Technology Plan, all school communities are to develop a formal plan for device maintenance and refreshment by the 2023 - 2024 school year.

One of the most important areas of concern and consideration for school technology hardware and infrastructure refreshment is budgeting. Technology purchases are not a “one and done” purchase; technology requires consistent monitoring and upgrades to function optimally in a learning environment. Schools may utilize a variety of funding solutions to budget for technology within their community. Government funds and grants, such as NPIS, eRate, or

¹⁶ "Auto Update policy - Google Chrome Enterprise ... - Google Support." <https://support.google.com/chrome/a/answer/6220366?hl=en>. Accessed 14 Apr. 2021.

the current EANS grants, play a substantial role in supporting technology procurement. A specified portion of tuition funds should be allotted for continuous improvement of school technology - both devices and infrastructure. Additionally, many school communities utilize a technology fee to support technology repairs, insurance, purchases and upgrades. These fees are typically assessed on a per student or per family basis. These technology fees can range from \$25-200+ as appropriate. Finally, schools should seek outside grants, funding, or fundraising, through local foundations or private donors to support technology purchases. When planning for technology procurement and refreshment, stakeholders should consider the steady funding sources as the basis for their plan.

Having a plan to consistently evaluate and replace technology can be accomplished through examining a few baseline areas. First, an inventory of all school hardware, along with the age and working condition of the devices should be compiled. This allows leaders to evaluate the areas of greatest need to prioritize procurement. School campus and building infrastructure needs should be considered within this initial evaluation and inventory as well.

After an evaluation of the current inventory and discussing a local vision for future educational technology needs, a formalized plan should be created. In collaboration with leaders, teachers, pastors, business managers, Boards of Limited Jurisdiction, key stakeholders, students, and parents, school communities may consider “working backwards” to determine the approximate yearly cost of refreshment and schedule of such in accordance with the baseline recommendations outlined in this plan.

Summary of 2021 - 2026 Goals, Listed by Areas of Focus

- Technology Integration using the Triple E Framework
 - Through 2026, continue to integrate technology to Engage, Enhance, and Extend the curriculum to deepen student learning in all grades PreK-12 through yearly professional development and educator support.
- Universal Tools for Teaching and Learning
 - By 2022, schools will plan for comprehensive professional development and educator support to meet baseline technology skill sets for teaching and learning.
 - Through 2026, continue to utilize school appropriate technologies, such as Google Workspace for Education, LMS, and SIS in alignment with the Office of Catholic Education.
- Foundations for Virtual, Concurrent, and Hybrid Learning
 - By 2025, schools will have developed a plan for an ongoing virtual learning academic course or extracurricular opportunity.
- Digital Citizenship
 - Through 2026, continue to teach yearly digital citizenship lessons as developed and/or recommended by the Office of Catholic Education and AoPTech for all grades PreK-12.
 - Elementary Schools are recommended to utilize the [Common Sense Media Digital Citizenship Curriculum](#) within either technology classes and/or grade level homerooms
 - Secondary Schools are (recommended/required/approved/mandated) to utilize the [Secondary Schools Digital Citizenship](#) as developed by AoPTech and the Office of Catholic Education Secondary Leaders.

- All grade levels may support the previous recommendations with self-selected supplementary materials
- Hardware and Refreshment
 - By 2023, school communities will develop specific plans for technology refreshment cycles for hardware, devices, and building infrastructure.
 - Through 2026, continue to plan and execute device procurement to support 1:1 devices for in-person and/or virtual settings in all grade levels PreK-12.

Summary of 2021 - 2026 Goals, Listed Chronologically

- 2022 - 2023 School Year
 - By 2022, schools will plan for comprehensive professional development and educator support to meet baseline technology skill sets for teaching and learning.
- 2023 - 2024 School Year
 - By 2023, school communities will develop specific plans for technology refreshment cycles for hardware, devices, and building infrastructure.
- 2025 - 2026 School Year
 - By 2025, schools will have developed a plan for an ongoing virtual learning academic course or extracurricular opportunity.
- Ongoing through the 2026 - 2027 School Year
 - Through 2026, continue to integrate technology to Engage, Enhance, and Extend the curriculum to deepen student learning in all grades PreK-12 through yearly professional development and educator support.
 - Through 2026, continue to utilize school appropriate technologies, such as Google Workspace for Education, LMS, and SIS in alignment with the Office of Catholic Education.
 - Through 2026, continue to teach yearly digital citizenship lessons as developed and/or recommended by the Office of Catholic Education and AoPTech for all grades PreK-12.
 - Through 2026, continue to plan and execute device procurement to support 1:1 devices for in-person and/or virtual settings in all grade levels PreK-12.

Conclusion

As our students are called to be faith-filled global citizens, school communities must heed the call to foster robust learning environments that integrate technology as a means of Engaging, Enhancing, and Extending students' horizons. Students require instruction on the proper use of technology and digital citizenship. Educators are role models for faith-filled responsible technology use in their school communities. Technology is a tool that assists educators with meeting the diverse needs of all Archdiocesan students, while preparing them for academic life and beyond. When combining our faith, curriculum, teacher support, and appropriate technology, we can produce the next generation of leaders and saints.

Appendix A: Technology and Leadership

A key aspect of successful school technology programs is the influence leadership has within the school community. School leaders and administrators are an integral part of the evaluation, integration, and success of technology. A leader's influence over the school culture and attitude towards technology can mean all the difference in advancing the state of the school.

It is imperative that leaders lean into technology with an open, growth based mindset. While technology skills or comfort does not come naturally, leaders set the tone in the community. *When a leader takes the time to learn the same tools as teachers are utilizing, it provides an additional layer of support for the educators in the building.* It allows educators to feel valued and models the importance of continuous learning. Even choosing to communicate positively when speaking about technology is a positive influence. Leadership should not be afraid to demonstrate their own strengths and areas of growth, they should call upon other tech champions for help, and they should celebrate the successes of their community.

Utilizing the educator baseline skillset, outlined in the Universal Tools for Teaching and Learning portion of this 2021 - 2026 Technology Plan can provide a starting point for a personal technology journey. [ASCD](#) and [ISTE](#) are professional organizations that offer resources and standards for leaders around a variety of topics, including technology. The Pennsylvania Educational Technology Expo and Conference (PETE&C) is a wonderful opportunity for administrators and educators to grow their craft and explore trends in educational technology.

Within the Archdiocese of Philadelphia Schools, leaders can utilize the support of the AoPTech team and the Technology Integration Coaches to support leadership development in the use of technology, as well as, to support the growth and development of their faculty. This can be accomplished through both small group personalized support and larger faculty professional developments. The AoPTech team provides support and guidance to help bring you and your school community together.

When leaders support and model technology integration in their school, the whole school community will thrive!

Appendix B: STEM Education

STEM is an educational framework focused on the balance and integration of **Science, Technology, Engineering, and Math** throughout the curriculum. To develop globally minded 21st century learners, a STEM approach promotes inquiry based learning, collaboration, creativity, grit, resilience and high level critical thinking skills through the design thinking model. The end result is for students to grow as effective communicators and problem solvers, while also fulfilling all the rigors of a challenging curriculum.

In the elementary schools of the Archdiocese of Philadelphia Schools, a STREAM model with the addition of the “R” for **Religion** and “A” for the **Arts** is presently utilized. When planning for STREAM instruction in the classroom, some considerations need to be made. First, these lessons and activities should be interdisciplinary, combining several content areas or standards into a rigorous learning experience. Teachers should also utilize the design thinking model as a framework for this inquiry based learning. For example, fusing math and art, or science and religion, are fantastic places to begin utilizing a more STREAM based approach. No specific specialized equipment is necessary for this style of instruction; any classroom materials or school technology can be adapted and utilized. However, many high quality devices and programs, such as robotics, 3D printers, digital animation tools and others can help to support STREAM education.

At the secondary level of the Archdiocese of Philadelphia Schools, a more formal STEM approach is currently taken as a part of career and college readiness skills. These programs can consider many of the same factors as elementary focus, with a heavy focus on advanced math, science and engineering problem solving. Design thinking, backwards planning, interdisciplinary focus on standards, and utilization of high-level content are all essential to effective STEM planning.

Both the rigor and relevance of STEM lessons can be greatly amplified through connections to real world situations. Students can focus their inquiry on solving problems, while utilizing knowledge from multiple content areas. Secondary schools are uniquely situated for this because of the specialized content areas, technology resources available, and potential connections to the

surrounding community. A deep, engaging learning experience can be created when departments collaborate, modeling the same collaboration encouraged with students.

To help support technology integration and the utilization of STREAM/STEM in the classroom, the AoPTech STEM Lending Library is available for use by any PreK-12 educators within the Archdiocese of Philadelphia Schools. This library consists of specialized STEM focused equipment that school communities may borrow. Educators meet with a Technology Integration Coach to support professional development and effective implementation. For more information regarding the STEM Lending Library, please visit www.aoptech.org.

Appendix C: Utilizing AoPTech Department Support

The AoPTech Team is available and willing to help support all Archdiocese of Philadelphia Schools PreK-12 in the evaluation and integration of educational technology. The AoPTech team, led by the Director of Technology, has three branches of support. These branches and their functions are briefly outlined below. Schools are encouraged to contact and collaborate with the AoPTech team!

- **Director of Technology PreK-12**

- **Senior Information Technology Team**
 - Supports local secondary school IT and technicians
 - Consults with elementary schools as requested
 - Provides technology purchasing guidance and vendor recommendations

- **Operational Technology Team**
 - Supports the implementation and management of Learning Management Systems and Student Information Systems
 - For PowerSchool SIS, Schoology, Zoom, HMH, Health eTools, or SchoolMessenger requests please email pstech@archphila-oc.org

- **Technology Integration Coaches Team**
 - Supports the integration of technology into the school curriculum through educator support and professional development
 - For more information on the AoPTech team, please visit www.aoptech.org or reach out to techcoaches@archphila-oc.org for guidance.