Technology Plan

2017-2021

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District Information

East Greenbush Central School District is a high-achieving public school district in the Capital Region, located five miles from Albany, N.Y. The District serves approximately 4,000 students in seven schools – one high school, one middle school and five neighborhood elementary schools.

The District uses technology to support and enhance instruction with the goal of improving student success. Guided by the Technology Committee and a comprehensive Technology Plan, the District provides students and staff with the necessary tools for a 21st century education:

- Interactive white boards in classrooms
- Computer labs
- Handheld devices such as tablet computers
- Web-based resources

East Greenbush CSD continually seeks to improve its technology services. In February, the District partnered with Google Apps for Education, allowing for more innovation and collaboration between students and teachers. In April, the Board of Education approved the Smart Schools Investment Plan to use $2.3 million in state funding for technology upgrades including wireless Internet at all seven schools and additional learning devices.
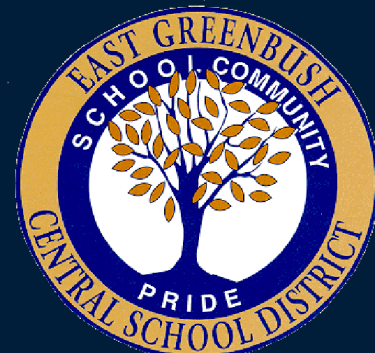
Mission Statement

To make available to all students, a safe learning environment that affords academic excellence in all its programs; provides dedicated and supportive staff; and works in partnership with family and the community with the intent to set up all students for success with their future endeavors.

Vision Statement

Our vision is to develop an educational technology program that is innovative, rigorous, and engaging at all levels.

- Students will use technology in practical ways to develop their communication and collaboration skills, develop problem solving skills, improve creativity, and increase critical thinking. Students will become effective, self-directed learners who feel a sense of ownership for their learning.

- Teachers will use technology to allow students an opportunity to shine, feel the benefits of their hard work, and develop an increased sense of belonging with our school community.

- Parents will use our technology to stay connected to the learning activities of their children, establish ongoing partnerships with teachers and administration in support of our joint educational objectives, and assist the district in our shared goal of keeping all students safe.

- District leaders will support students and staff by providing the necessary equipment and professional development in order to create a school community that fosters a variety of communication styles, encourages risk taking in the areas of exploration and implementation, and influences both teachers and students to become problem solvers within our ever changing society.
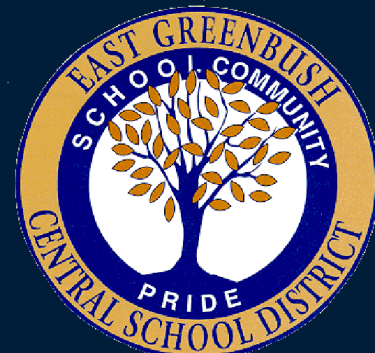
Goals

1. Curriculum Frame– Scope and Sequence

Developing a technology integrated strategy designed to provide a platform through which we will inform teachers, students, administrators, and parents of the scope and sequence of instruction and the expected outcomes across the phases of student development in a universal and equitable manner throughout the district.

2. Focus on the 4 C's

Adopting a cloud based instructional approach that is supported by classroom technology which fosters personal **communication** and by using automated methods, permits student to student **collaboration** while on line, poses structured problem solving opportunities that are pointed towards the development of **critical thinking** skills, and allows for **creative expression** using technology.

3. Active Learning Spaces

Employing technology to provide spaces that are easily adapted to the needs of the students and teachers and a variety of grade levels. A space that is equipped with physical resources, but also allows students the opportunity to explore alternate ways to demonstrate understanding, engage in project based learning, and provides a pathway to use 21st Century modeling tools through the use of virtual reality technology.

4. Supporting Global Learning

Supporting Global Learning through the advancement of the district toward universal systems literacies and competencies, supporting and acknowledging achievements, building partnerships within and beyond the school district, fostering an openness of mind, heart, and will.
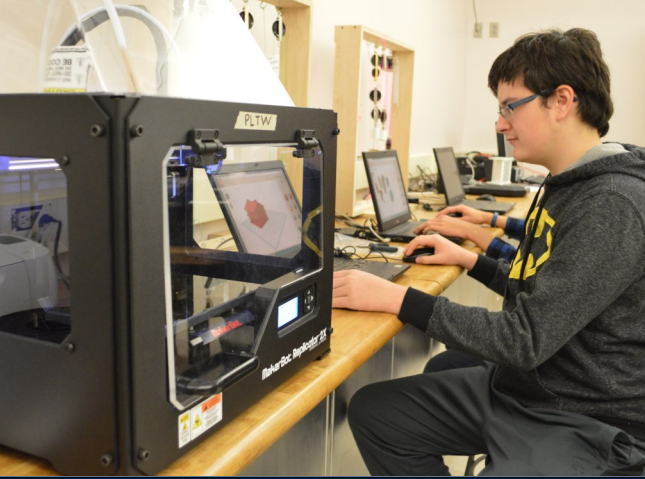
Core Beliefs

1. All students need to engage in activities that provide opportunities to learn through the appropriate use of technology as a learning tool.

2. All students need to receive instruction which teaches them how to be safe when online.

3. Technology can foster the inclusion of multiple perspectives through the use of collaborative assignments that employ 21st century technologies.

4. Lessons involving technology should be student centered and needs driven, in a way that allows students to form a sense of ownership over their learning.

Core Beliefs

5. Families that are informed and involved can help to support the success of students.

6. Students are best motivated by using technology that works well, limits barriers, and can be adapted to meet their specific needs and preferences.

7. Technology enhances the curricular aspect of the classroom and therefore every instructional space must have a technology plan which is aligned with the curricular plan.

8. Technology changes or updates must have corresponding changes or updates to the professional development plan so that both plans are aligned and support the growth of the students.

Current State of Technology

The District identified increased access to technology by faculty and students and increased professional development as the two most powerful factors influencing teaching and learning. This Technology Plan reflects our desire to address these findings in a way that builds the skills necessary for College and Career Readiness. By focusing on technology that supports enhanced communication ability, new and exciting opportunities for collaborative learning, critical thinking skills that lend themselves to project-based learning, and additional media and venues for creative outlet, the district will meet the goals and objectives defined in this plan. Through a combination of Capital Project funding and Smart Schools Bond Act monies, the district will develop a robust wireless network which provides a consistent and equitable WiFi experience for all students. Additionally, the district will add at least 3,300 chrome book computers at every level to the computer platforms already present. All Faculty and Administrators will have the opportunity to participate in a minimum of two hours of technology-focused professional development annually during Superintendent's Conference Days and building level meetings. This Professional Development began in September 2015. Professional development will focus on Communication, Collaboration, Critical Thinking and the foundational skills associated with G-Suite (Google's platform for education). The plan also calls for at least 50 interactive display devices which will be deployed throughout the district.
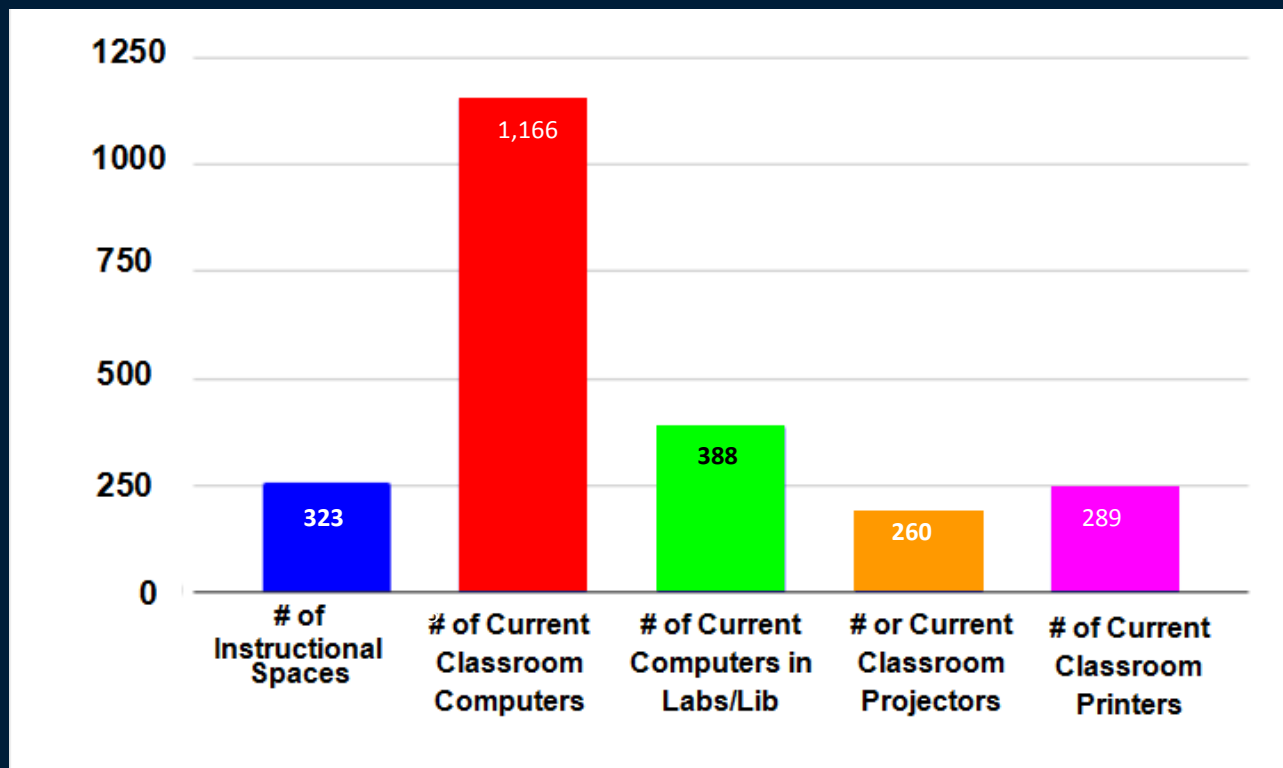
Funding

Capital Project Bond Approval

In May of 2017, district voters approved a $39.7 Capital Project which involves many needed updates to the schools. Those updates secured funding for badly needed infrastructure upgrades to telephone, intercom, and security systems. Also included in that bond was some funding for the wiring necessary to support the wireless improvement project in the district.

Smart Schools Bond Act

In July of 2017, the district was informed that two of the three plans that were submitted to the New York State Education Department have been approved. The first plan included funding to fully implement the district's WiFi initiative. The second plan approved funding for the display devices. The third plan has not been approved yet, but includes the funding necessary for the purchase of the 3,300 chrome books. We anticipate that the funding for the chrome books will happen in the next meeting of the Smart Schools Bond Act working committee.

Scope and Sequence

EGCSD Library and Digital Skills

Curriculum Map			
Kindergarten Library Digital Literacy Skills			
Library & Information Literacy Skills	**Stand-ards**	**Technology and Computer Based Skills**	**Stand-ards**
Literacy appreciation; differentiate between fiction and nonfiction	AASL 4.3.2 IFC K.3	Understand computers/ technology re-sources as a tool to enhance learning	ISTE 1.d
Being good library citizens; book use and care; sto-rytime behavior (active listening)	AASL 3.2.2	Understand an age appropriate concept of internet and computer safety	ISTE 2, AASL 1.3.5
Orientation and circulation (navigating the space; alphabetizing; borrowing policies, checkout proce-dures, etc.)	AASL 1.1.4 IFC K.4	Use correct posture and computer lab etiquette	ISTE 1
Understanding roles of author and illustrator	AASL 4.1.3	Understand vocabulary- Identify main parts of the computer	ISTE 1
Choosing and evaluating "just right" books	AASL 4.3.3 IFC K.1	Mouse skills-cursor, click/drag/drop, dou-ble click	ISTE 1
Finding and using books for various purposes	AASL 4.3.2 IFC K.5	Begin to use the keyboard locating num-bers and letters	ISTE 1
Understand role of librarian and purpose of library as well as library vocabulary and terminology	AASL 3.2.2	Identify specific programs or locations/ know how to go to locations and initiate programs	ISTE 1.d, ISTE 1.a
Identify parts of a book (cover, spine, title, author, etc.)	AASL 1.1.4 IFC K.2	Exit programs	ISTE 1.a, ISTE 1.d
Appreciation of of award-winning books; identify Caldecott and Newbery distinguished books	AASL 4.1.1		

Scope and Sequence

EGCSD Library and Digital Skills

Curriculum Map

1st Grade Library Digital Literacy Skills			
Library & Information Literacy Skills	**Standards**	**Technology and Computer Based Skills**	**Standards**
How to find the best book (5 finger rule); self-selection of appropriate materials	AASL 4.1. IFC 1.2	Understand the concept of logging in and logging out	ISTE 1.a, ISTE 1.d
How to use a shelf marker	AASL 1.1.4 IFC 1.2	Continue to develop understanding and use of keyboard, locating numbers and letters, enter key, spacebar, caps lock, shift keys, delete and backspace	ISTE 1
Expand understanding of parts of a book (table of contents, glossary, etc.)	AASL 1.1.4	Equate typing with writing	ISTE 3.c
Identify story elements (characters, setting, main idea)	AASL 4.1.2 IFC 1.5	Type name, alphabet, simple words and sentences	ISTE 1
Differentiate between fact and opinion	AASL 1.1.7 IFC 1.3	Understand an age appropriate concept of internet and computer safety	ISTE 2 AASL 1.3.5
Location skills in Easy fiction section	AASL 1.1.4 IFC 1.2		

Curriculum Map

2nd Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Stand-ards	Technology and Computer Based Skills	Stand-ards
Using the OPAC (online public access catalog); keyword skills	AASL 1.1.4 IFC 2.3	Continue to gain familiarity and proficiency with keyboard usage/ begin to understand homerow and	ISTE 1
Introduce interlibrary loan process	AASL 4.1.1 IFC 2.1	Perform basic formatting tasks including font, color, bold, italic, underline, alignment	ISTE 1
Introduce reference sources (maps, dictionary, encyclo-pedia)	AASL 1.1.4 IFC 2.1	Evaluate sources and websites	ISTE 3.b AASL 1.4.1
Identify main ideas and supporting details in story (who, what, when, where, how)	AASL 1.1.6 IFC 2.6	Begin to use age appropriate data-bases and other online sources	ISTE 3.a ISTE 3.b ISTE 3.c AASL 4.1.4
Location skills in Easy fiction, Easy nonfiction, chapter book section	AASL 2.1.2	Understand an age appropriate concept of internet and computer safety	ISTE 2 AASL 1.3.5

Curriculum Map

3rd Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Stand-ards	Technology and Computer Based Skills	Stand-ards
Book order and arrangement in the library; fiction, nonfiction and reference collection (ABC order v. Dewey Decimal System; call numbers and spine labels to locate materials)	AASL 1.1.4 IFC 3.1	Understand the login process and the and the reason for it/ able to login and logout properly	ISTE 1.a ISTE 1.d
Search online catalog using author, title and subject	AASL 1.1.1 IFC 3.2	Build on knowledge of home row for typing as previously introduced, proper posture, and typing with accuracy.	ISTE 1
Identify features of nonfiction (glossary, index, etc.)	AASL 2.4.4	Begin using typing skills, practice typing referencing student generated hand-written material as well as from student generated notes	ISTE 3.c
Locate and use reference information from various sources (nonfiction, encyclopedia, atlas, etc.)	AASL 1.4.3	Continue evaluating sources	ISTE 3.a ISTE 3.b ISTE 3.c AASL 1.4.1
Digital resources for research	AASL 1.1.8 IFC 3.3	Cut, copy, paste text within a document and insert graphics from an outside source	ISTE 1 AASL 4.1.8
Identify and understand characteristics of genre	AASL 4.2.2	Rename and move files	ISTE 1
Introduce fables, folktales, myths, tall tales, and determine central message or moral from key text details	AASL 4.1.3 IFC 3.4	Print files	ISTE 1

Curriculum Map

3rd Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Stand-ards	Technology and Computer Based Skills	Stand-ards
		Basic functions within slide presentation program	ISTE 4.a ,ISTE 4.b, AASL 4.1.8
		Understand an age appropriate concept of internet and computer safety	ISTE 2 AASL 1.3.5

Scope and Sequence

EGCSD Library and Digital Skills

Curriculum Map

4th Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Stand-ards	Technology and Computer Based Skills	Stand-ards
Expand use of OPAC and interlibrary loan to become more independent library users	AASL 1.1.4 IFC 4.1	Change page orientation, manip-ulate images (size, location, rela-tionship to text)	ISTE 1 ISTE 4.b AASL 4.1.8
Utilize online resources for research, including databases, search engines, websites	AASL 1.1.6 IFC 4.4	Create folders and organize files	ISTE 1 ISTE 5.b
Evaluate print and online sources and cite sources	AASL 1.2.4	Use effective search strategies to locate appropriate websites--website evaluation	ISTE 3.a, ISTE 3.b AASL 1.4.1 AASL 4.1.4
Introduce digital literacy and staying safe online	AASL 1.3.5 AASL 3.1.6	Begin to use and understand the research process--source selec-tion, note taking, graphic organiz-ers, sharing and displaying infor-mation, works cited	ISTE 3.c AASL 2.1.1
Read and summarize a text, explain key details, compare and contrast themes and topics (critical reading)	AASL 1.1.7 IFC 4.5	Understand an age appropriate concept of internet and comput-er safety with digital citizenship	ISTE 2 AASL 1.3.5
Dewey Decimal System (10 main categories)	AASL 1.1.8		
Selection and organization of relevant information	AASL 4.1.6 IFC 4.7		

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5th Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Standards	Technology and Computer Based Skills	Standards
Expand research process emphasizing inquiry; develop research questions	AASL 2.1.1 IFC 5.2	Understand an age appropriate concept of internet and computer safety with digital citizenship	ISTE 2 AASL 1.3.5
Continue evaluating print and online sources	AASL 1.2.4 IFC 5.5	Build a broader understanding of the research process--source selection, note taking, graphic organizers, sharing and displaying information, works cited	ISTE 3.c AASL 2.1.1
Recall relevant information, summarize, paraphrase, notetaking	AASL 1.3.3 IFC 5.6	Fluency in working with word processing programs and presentation programs	ISTE 4.b AASL 4.1.8
Utilize online sources for research and create digital products	AASL 3.1.4 IFC 5.4	Use effective search strategies to locate appropriate websites--website evaluation	ISTE 3.a, ISTE 3.b, AASL 1.4.1 AASL 4.1.4
Develop keywords that define the search	AASL 1.1.3	Use tools to collaborate with teachers and students in the learning community	ISTE 7 AASL 4.3.1
Refine/redefine an information problem or task and/or develop a research question	AASL 1.4.3 IFC 5.1		
Analysis of multiple resources on one topic	AASL 1.2.4		
Copyright and plagiarism	AASL 1.3.1		

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EGCSD Library and Digital Skills

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6th Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Stand-ards	Technology and Computer-Based Skills	Stand-ards
Recognizes the organization and use of special sections in the library (e.g. reference, graphic novels, etc.)	IFC#1	Understands basic concepts underlying hardware, software and connectivity of computers and the web.	AASL 1.1.8 ISTE 1d
Selects books and materials for classroom and personal use at appropriate interest and reading levels to develop lifelong reading habits	IFC#2 AASL 4.1.1	Achieves fluency in word processing skills.	AASL 1.1.8 ISTE 1a
Develops research questions and determines what information is needed to support the investigation and answer the questions	AASL1.1.3	Achieves fluency in basic spreadsheet skills (tables, charts, and graphs)	AASL 2.1.4 ISTE 1a
Uses online catalog independently to locate specific books, get classification numbers, and browse the shelves	IFC#1 AASL 1.1.4	Achieves fluency in multimedia and presentation skills	AASL 1.1.8 ISTE 4b
Understands the difference between primary and secondary sources	IFC#1	Understands responsible use of technology and ethical and safety issues in using electronic media at home, in school, and in society including issues of privacy and cyber-bullying	IFC#3 AASL 4.3.4 ISTE 2b
Combines information and weighs evidence to draw conclusions and create meaning	AASL 1.1.5	Uses effective search strategies for locating and retrieving web based information	IFC#1 AASL 1.1.4 ISTE 3
Presents conclusions and supporting facts in a variety of ways	IFC#1	Uses technology to collaborate with others to exchange ideas, develop new understandings, make decisions and solve problems	IFC#1 AASL 2.1.5 ISTE 7
Introduce bibliographies:Create Works Cited page using MLA 8	AASL 3.1.4 IFC #3	Uses guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects	AASL 3.1.4 ISTE 4c

Curriculum Map

6th Grade Library Digital Literacy Skills

Request material through interlibrary loan	AASL 1.4.2 IFC #2	Observes Internet safety procedures, including safeguarding personal information and equipment	IFC#3 ISTE 2d
Introduce bibliographies:Create Works Cited page using MLA 8	AASL 3.1.4 IFC #3	Uses guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects	AASL 3.1.4 ISTE 4c

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EGCSD Library and Digital Skills

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7th Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Stand-ards	Technology and Computer Based Skills	Stand-ards
Selects books and materials for classroom and personal use at appropriate interest and reading levels to develop lifelong reading habits	IFC#2 AASL 4.1.1	Uses search engines and online directories effectively to find, evaluate, and select appropriate sources.	AASL 1.1.4 IFC 3 ISTE 3
States and verifies what is know about the problem or question and makes connections to prior knowledge	AASL1.1.2 IFC#1	Uses the writing process, media and visual literacy, and technology skills to create products that express new understandings.	AASL 2.1.6 ISTE 3
Evaluates quality of print and electronic information for usefulness, currency, authority and accuracy	AASL 1.1.5 IFC#1	Uses guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects	AASL 1.1.6 ISTE 6c
Uses both facts and opinions responsibly by identifying and verifying them. Interprets information and ideas by defining, classifying, and inferring	AASL 1.2.4 IFC#1	Uses the writing process, media and visual literacy, and technology skills to create products that express new understandings.	AASL 3.1.2 ISTE 4
Uses common organizational patterns (chronological, alphabetical, numerical, and cause and effect, compare/contrast) to organize information in order to draw conclusions	AASl2.1.4 IFC #1	Uses information and technology ethically and responsibly including a discussion of security, and piracy	AASL 3.1.6 IFC#3
Uses established criteria or collaborates with classmates and teacher to develop criteria for assessment	AASL 3.4.1 IFC#1	Uses technology to collaborate with others to exchange ideas, develop new understandings, make decisions and solve problems	IFC#1 AASL 2.1.5 ISTE 2
Can create a Works Cited page and cite sources using MLA 8	AASL 3.1.4 IFC#3	Observes Internet safety procedures, including safeguarding personal information and equipment	IFC#3 ISTE 2d
Request material through interlibrary loan	AASL 1.4.2 IFC#2		

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8th Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Standards	Technology and Computer Based Skills	Standards
Selects books and materials for classroom and personal use at appropriate interest and reading levels to develop lifelong reading habits	IFC#2 AASL 4.1.1	Demonstrates mastery of technology tools for accessing information and pursuing inquiry.	AASL 1.1.8 ISTE 3
Revises the question of problem as needed to arrive at a manageable topic for inquiry	AASL 1.1.3	Maintains a critical stance by questioning the validity and accuracy of all information.	AASL 1.2.4 ISTE 3
Refines questions to guide the search for different types of information (e.g. overview, big idea, specific detail, cause and effect, comparison)	IFC#1	Assess own ability to work with others in a group setting by evaluating varied roles, leadership, and demonstrations of respect for other viewpoints.	AASL 3.4.3 ISTE 7
Gather information from multiple formats, assess the credibility and accuracy of each source and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation	AASL 1.1.5 IFC #3	Use guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects	IFC #1 ISTE 3
Recognizes the effect of different perspectives and points of view on information. Seek divergent perspectives during information gathering and assessment.	IFC#1 AASL 1.3.2	Use information and technology ethically and responsibly.	AASL 3.1.6 ISTE 2
Recognizes that own point of view influences the interpretation of information	IFC#1	Understands the concept of freedom of expression and the role that it plays in democracy	IFC #3 ISTE 7
Draws conclusions based on explicit and implied information. Uses evidence from literary or informational texts to support analysis, reflection, and research	IFC#1	Practice safe and ethical behaviors in personal electronic communication and interaction.	AASL 4.3.4 ISTE 2
Identifies own strengths and sets goals for improvement	IFC #1 AASl 4.4.6	Seek information to answer personal questions and interests, trying a variety of formats and genres, and displaying a willingness to go beyond academic requirements.	AASl 4.2.2 ISTE 1

Scope and Sequence

EGCSD Library and Digital Skills

Curriculum Map

9th Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Stand-ards	Technology and Computer Based Skills	Stand-ards
Identifies keywords, concepts, and synonyms, both stated and implied, for topic and uses them to further research	IFC 9.1	Articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.	ISTE 1.a
Develops a schema or mind map to express the big idea and the relationships among supporting ideas and topics of interest	IFC 9.2	Cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.	ISTE 2.a
Takes notes using one or more of a variety of notetaking strategies, including reflecting on the information (e.g., graphic organizers, two-column notes)	IFC 9.3	Plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.	ISTE 3.a
Organizes information independently, deciding the structure based on the relationships among ideas and general patterns discovered	IFC 9.4	Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.	ISTE 4.a
Identifies own strengths and sets goals for improvement	IFC 9.5	Formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.	ISTE 5.a
Selects books and materials for classroom and personal use at appropriate interest and reading levels to develop lifelong reading habits	IFC#2	Choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.	ISTE 6.a
		Use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.	ISTE 7.a

Scope and Sequence

EGCSD Library and Digital Skills

Curriculum Map

10th Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Standards	Technology and Computer Based Skills	Standards
Develops and refines the topic, problem, or question independently to arrive at a worthy and manageable topic for inquiry	IFC 10.1	Build networks and customize their learning environments in ways that support the learning process.	ISTE 1.b
Refines questions to provide a framework for the inquiry and to fulfill the purpose of the research	IFC 10.2	Engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.	ISTE 2.b
Conducts advanced Web searches using Boolean logic and other sophisticated search functions	IFC 10.3	Evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.	ISTE 3.b
Draws clear and appropriate conclusions supported by evidence and examples	IFC 10.4	Select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.	ISTE 4.b
Cites all sources used according to standard style formats	IFC 10.5	Collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.	ISTE 5.b
Records individual experience of the inquiry process – the hardest part, best part, skills learned, insights experienced, etc. – with suggestions for future improvements	IFC 10.6	Create original works or responsibly repurpose or remix digital resources into new creations.	ISTE 6.b
Selects books and materials for classroom and personal use at appropriate interest and reading levels to develop lifelong reading habits	IFC#2	Use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.	ISTE 7.b
		Intellectual Property and Fair use	NYC DCG 10th

Scope and Sequence
EGCSD Library and Digital Skills

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11th Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Standards	Technology and Computer Based Skills	Standards
Plans inquiry to systematically test hypothesis or to gather evidence to validate thesis	IFC 11.1	Use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.	ISTE 1.c
Pursues a balanced perspective by evaluating information based on authority, accuracy, point of view, and reliability	IFC 11.2	Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.	ISTE 2.c
Uses the organizational features of a book as well as abstracts, tables, charts and first and last chapters to locate main ideas, specific supporting evidence, and a balanced perspective	IFC 11.3	Curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.	ISTE 3.c
Presents different perspectives with evidence for each	IFC 11.4	Develop, test and refine prototypes as part of a cyclical design process.	ISTE 4.c
Chooses the most appropriate format, tone and language to communicate ideas clearly in real world formats to different audiences	IFC 11.5	Break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.	ISTE 5.c
Selects books and materials for classroom and personal use at appropriate interest and reading levels to develop lifelong reading habits	IFC#2	Communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.	ISTE 6.c
		Contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.	ISTE 7.c

Scope and Sequence

Curriculum Map

12th Grade Library Digital Literacy Skills

Library & Information Literacy Skills	Stand-ards	Technology and Computer Based Skills	Stand-ards
Explores problems or questions for which there are multiple answers or no "best" answer	IFC 12.1	Understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and trouble-shoot current technologies and are able to transfer their knowledge to explore emerging technologies.	ISTE 1.d
Challenges ideas in text and makes notes of questions to pursue in additional sources	IFC 12.2	Manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.	ISTE 2.d
Builds a conceptual framework by synthesizing ideas gathered from multiple sources	IFC 12.3	Build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.	ISTE 3.d
Develops own point of view and supports with evidence	IFC 12.4	Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.	ISTE 4.d
Evaluates own product and process throughout the work and uses self-assessment, teacher feedback, and peer feedback to make revisions when necessary	IFC 12.5	Understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.	ISTE 5.d
Selects books and materials for classroom and personal use at appropriate interest and reading levels to develop lifelong reading habits	IFC#2	Publish or present content that customizes the message and medium for their intended audiences.	ISTE 6.d
		Explore local and global issues and use collaborative technologies to work with others to investigate solutions.	ISTE 7.d

ISTE Standard:

Administrators create, promote and sustain a dynamic, digital age learning culture that provides a rigorous, relevant and engaging education for all students.

Improve Ease of Use:

1. Create a Annual Responsibility Map to decide, record, and assign each of the tenets of the yearly plan.

2. Analyze the district wide inventory and make recommendations for the equitable distribution and acquisition of both hardware and software.

3. Develop resource sharing methodology for labs and devices that is informed by the Local Education Plan.

4. Improve overall ease of access to the network, especially for our K-2 students.

5. Increase non-employee access to wireless/accounts as appropriate.

6. Develop a sustainable replacement cycle for hardware.

7. When a technology issue requires multiple perspectives or further exploration, create a subcommittee with accountability to report back to the technology committee and the Director of Technology.

8. Establish a web site, under the district website that functions as an Educational Technology Resource page for all stakeholders to use.

ISTE Standard:

Administrators create, promote and sustain a dynamic, digital age learning culture that provides a rigorous, relevant and engaging education for all students.

Improve Ease of Use:

9. Increase equitable access to applications on all computer systems.

10. Introduce a process for the request, justification, review, approval, or denial of technology requests for software and hardware. Equity based recommendations should be made by the Technology Committee, be driven by student need, aligned with existing technology planning for that space, and be grounded in supporting data.

Requests Form

Rubric for Evaluating Requests

ISTE Standard:

Administrators create, promote and sustain a dynamic, digital age learning culture that provides a rigorous, relevant and engaging education for all students.

Provide Training for Staff:

1. Establish communication and cross collaboration with the curriculum committee consisting of regular updates from a representative of the Technology Committee.

2. Develop new employee professional development to support the Technology Plan and the base set of skills necessary to operate in the district's computing environment for that specific teacher or employee location.

3. Develop targeted PD for Leadership.

4. Professional development for teachers regarding the integration process.

5. Develop a rewards system for teachers developing technical skills. This would take the form of digital badging.

6. Establish an online site dedicated to the access and delivery of professional development.

ISTE Standard:

Administrators create, promote and sustain a dynamic, digital age learning culture that provides a rigorous, relevant and engaging education for all students.

Begin Creating the Conditions for 21st Century Learning:

1. Begin expanding current course offerings by leveraging the content and courseware available from our Cisco Academy, starting at the middle school level.

2. Develop an internship program at the high school which allows students to earn credit and gain real life technical support experience.

3. Develop an after school technology program at each school to further digital literacy.

4. Re-imagine the role of Library Media Specialists in terms of scope and sequence.

5. Develop a plan to support 24/7 access to content.

6. Develop plans to implement STEM based makerspace areas in each building.

7. Partner with local industry to provide STEM connected viewpoints and to introduce possible career paths.

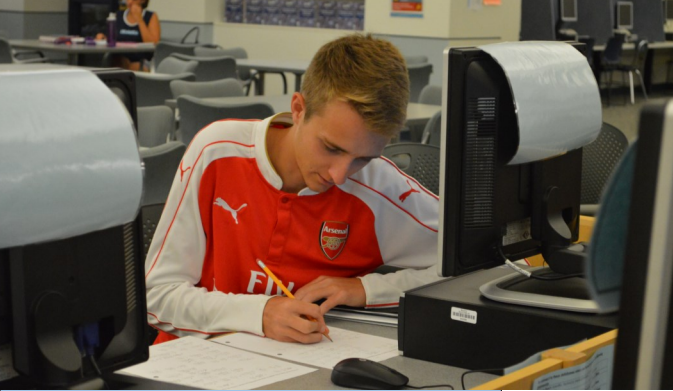8. Plan an update of the 7-12 Technology Program to include 21st Century fabrication equipment.
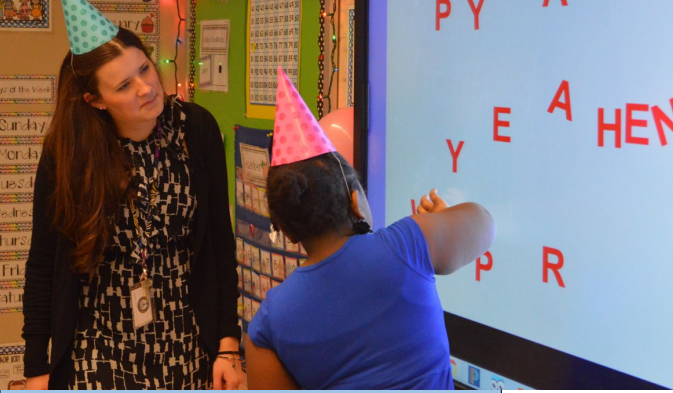
ISTE Standard:

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

Increase Communication:

1. Develop a pilot of a tele-presence based facility in classrooms at each level.

2. Create and continue a monthly technology e-newsletter that has current updates and is student operated and published.

3. Create a resource management plan to utilize and inform staff and stakeholders of existing equipment and possible teaching techniques involving technology.

4. Encourage staff to create and maintain classroom websites.

5. Maintain regular communication with local Google enthusiasts and technology innovators.

6. Continue to expand and encourage the use of the parent portal to encourage more home support and to create more opportunities to engage.

7. Continue to leverage social media to inform our stakeholders about the Technology Plan related events and programs.

8. Update the Annual Responsibility Map.

ISTE Standard:

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

Encourage Collaboration between Stakeholders:

1. Incorporate physical and virtual learning spaces as well as training and tools to address current and future models.

2. Expand business connections.

   A. Connection to other districts for notable practices, inspiration and collaboration.
   B. Collaborate with local university teacher.

3. Move towards 24/7 access to content for students.

4. Hold a Technology Fair every other year to show-case student projects for the community stakehold-ers in order to encourage project mentoring and multi-year efforts in problem based learning.

ISTE Standard:

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

Provide Training for Staff:

1. Continued New-Employee professional development in the following areas:

    A. G Suite

    -Set targeted goals for student and staff use of Gmail, docs, slides, calendar,

    B. Google Classroom

    -Blended or Flipped pedagogy pilots

ISTE Standard:

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

Problem-Based Learning:

1. Professional Development for teachers.

2. Develop a plan for implementation with the consistent support from district leadership, and integrate with flipped learning opportunities.

3. Encourage multi-year student projects, especially in the area of computer programming.

By the Year 2020:

1. All teachers will have regular access to a district provided chromebook or laptop computer and become conversant with this technology.

ISTE Standard:

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

Global Learning:

1. Inclusion of various instructional models and tools such as Distance Learning, Flipped Learning, Professional Development, Project Based Learning, Blended Learning, Substitution, Augmentation, Modification, and Redefinition (SAMR), virtual classrooms, etc.

2. Incorporating various types of technological tools help enhance student creativity such as Blogs, Mind-mapping, Digital Storytelling, Simulation games, Video and Audio tools etc.

3. Create a strand of this plan that creates a student community of computer programmers who are able to access and participate in larger technical communities for support and to enrich their learning.

Sustainability

Sustainability Requires Planning

1) A 1:1 Chromebook initiative in grades 3-12 is the goal for the district by the end of this 4-year plan. Such an initiative will require a cyclical replacement timeline that refreshes with new computers and accounts for anticipated loss or damage. At all times, the district will allow BYOD with proper registration and credentialing.

DISTRICT WIDE				
ACADEMIC YEAR	PURCHASE	REPLACMENT CYCLICAL	LOSS/DAMAGE	COST
2017-2018	3325	0	334	$66,800.00
2018-2019		0	334	$66,800.00
2019-2020		0	334	$66,800.00
2020-2021		3325		$665,000.00

2) A large number of the district desktop computers are well past end of life and will be replaced by the chromebooks in our classrooms. For this reason, deployed desktops will drop from 1,166 units to about 500 units after the roll out of the chromebooks. A 4-year plan for the cyclical replacement of the 500 desktops will cost $87,500 per year over 4 years.

DISTRICT WIDE		
ACADEMIC YEAR	REPLACMENT CYCLICAL	COST
2017-2018	125	$87,500
2018-2019	125	$87,500
2019-2020	125	$87,500
2020-2021	125	$87,500

Sustainability Requires Planning

3) The district has supplied and maintained a laser printer in almost every classroom at the primary level. Better than 50% of the classrooms in the middle school and high school have dedicated laser printers. The vast majority of these laser printers have been in service more than 7 years. The district has begun, and will continue to move to a managed print solution which will feature modern, high volume laser printers and copiers shared amongst classrooms and conveniently located for teachers. The project will reduce toner costs, replacement costs, and break-fix costs dramatically. At the same time, the project will increase usage monitoring, feature "follow me" printing to any printer or copier, and enhance the teacher use of formative assessments. The district anticipates that year one costs will be offset by the savings realized over the durations of the lease terms for these new devices.

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