

Bainbridge-Guilford Central School District

Technology Plan

2016-2021

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A. Executive Summary

The Bainbridge-Guilford Technology Plan was developed in alignment with the BG Vision, Mission, Beliefs, the District Plan for Children with Disabilities, as well as research and best practices in the instructional technology field.

Bainbridge-Guilford recognizes and appreciates the students, staff members, parents, community members, and higher education who were engaged in the development of this plan. From November 2015 to April 2016 members of the planning committee worked on defining the vision, focus areas, outcomes, student and staff expectations, actions steps, and expected results for each focus area.

The goal of the Technology Plan is to transform the learning process by seamless technology integration, as we continue to support all learners by providing the necessary resources and guidance as we continue the shift from a focus on teaching, to a focus on learning.

The plan is organized in four major focus area with identified outcomes, expectations for students and staff, action steps and results. The four focus areas are interdependent:

Essential Technology Learning Competencies--A set of grade by grade competencies that each student will achieve

Professional Development--A plan for providing learning opportunities for staff so that they can implement the plan

Technology Infrastructure to Support Student Learning--Providing devices, a network, a virtual environment, wireless access and high speed internet to support student learning

IT Support--A plan for supporting the technology rich environment we envision at Bainbridge-Guilford Schools

B. Vision and Mission

The Bainbridge-Guilford School district will continue to be an exemplary 21st Century learning community whose students are engaged and empowered by their learning culture. Through opportunity and access to diverse technologies, students will be prepared to excel in an ever-changing world.

The Vision and Mission was created in accordance with numerous plans that we have investigated, as well as State regulations. The Technology Committee collaboratively formulated the Vision for Technology, integrating the Vision of the Bainbridge-Guilford Central School District with the necessities of technology within our district.

C. Technology Plan Committee Members

Peter Feltham, Technology Teacher, Bainbridge-Guilford Jr.-Sr. High School
Scott Graham, Dean of Students, Bainbridge-Guilford Jr.-Sr. High School
Alyssa Hardy, Art Teacher, Bainbridge-Guilford Jr.-Sr. High School
Cathleen Herman, Business Teacher, Bainbridge-Guilford Jr.-Sr. High School
Israel Lorimer, Technology Teacher, Bainbridge-Guilford Jr.-Sr. High School
Lorraine Porter, Technology Teacher, Greenlawn Elementary School
Phil Sheridan, BOCES

The Technology Committee met numerous times from November 2015 through March of 2016 with the common goal of creating a district-wide technology plan. We have discussed the necessity of a district-wide initiative focused on influence rather than advocacy, which has allowed the committee to create the plan with the good of the entire district in mind when making this plan.

Open forums entitled “Why Technology?” will also be held during June of 2016 in Guilford and Greenlawn Elementary Schools and the Jr.-Sr. High School. These open forums are intended to include all teachers within the process of the purposes of technology within Bainbridge-Guilford.

Curriculum

Focus Area 1:

Essential Student Technology Learning Competencies

Outcome

Students will master district identified grade level technology learning competencies by June, 2018.

Background: Student technology learning competencies drive the vision and development of the whole technology plan, so it is the first focus area. By having established student technology learning competencies, organized by grade level, we will know what instructional technology systems to put in place, what equipment needs to be purchased and maintained, and what professional development needs to be provided for staff to support professional learning and student success.

Expectations for Students and Adults

Students: Students will demonstrate mastery of the grade level specified technology learning competencies.

Adults: Teachers will become proficient with district identified technology tools and facilitate student learning to achieve grade level technology learning competencies.

Action Steps and Details

2016-2017

1) Develop student technology learning competencies by identifying, defining, and articulating learning competencies for adoption. These competencies will be aligned with both the CCSS (Common Core State Standards) Technology Skills and ISTE (International Society for Technology in Education) Standards.

BG Schools.

Detail: A committee, comprised of district professionals has met both virtually and in person to identify, define, and articulate the Pre-K-12 Essential Student Technology learning Competencies. These competencies are aligned to the ISTE Standards.

Depending on the skill and grade level, students will either be introduced to the skill, have it reinforced or extended. [See end of this Focus Area for Competencies]

We have also adopted ISTE's Standards for Teachers and Standards for Administrators . [See appendix for detail.]

2016-2017

1) Begin implementation of competencies and demonstrate mastery of skills through documentation of student work and performance on assessments.

Detail: Teachers will provide evidence of their students' mastery of grade level competencies through samples of student work and other assessments.

2) Add competencies as a resource to each grade level and/or subject's curriculum that is available on the district's web based curriculum mapping tool.

Detail: For easy reference by teachers and for accountability purposes, the Essential Student Technology Learning Competencies will be available to all grade levels.

2017-2018

1) Review and update competencies based on feedback from teaching staff.

Detail: We will perform interim assessments with staff to make judgements about the alignment of the competencies and student skill levels. Based on student and staff feedback we will modify student competencies as needed.

2018-2019

1) Review and update competencies based on feedback from students and teaching staff.

Detail: We will perform interim assessments with staff to make judgements about the alignment of the competencies and student skill levels. Based on staff and student feedback we will adjust student competencies as needed.

2) Begin planning for 2018-2022 Technology Plan.

Results by June, 2020

By 2018 Students will demonstrate mastery of the grade level specified technology competencies as evidenced by their work and/or assessments.

Essential Student Technology Learning Competencies

Technology literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21st Century.

The BG School District Essential Technology Learning Competencies for Pre-K-12 are aligned with both the Common Core State Standards (CCSS), the Framework for the 21st Century Learning and the International Society for Technology in Education (ISTE) Standards (teachers, students and administrators, adapted with permission).

The Essential Technology Learning Competencies are intended to provide ESM staff with a specific set of learning expectations to integrate technology use and enhance student learning.

ISTE Essential Student Learning Competencies for Pre-K-12 Overview

<p>Critical Thinking, Problem Solving, and Decision Making Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.</p>	<ul style="list-style-type: none"> ● Identify and define authentic problems and significant questions, investigation ● Plan and manage activities to develop a solution and complete a project ● Collect and analyze data to identify solutions and/or make informed decisions ● Use multiple processes and diverse perspectives to explore alternative solutions
<p>Communication and Collaboration Students use digital media and environments to communicate and work collaboratively, to support individual learning and contribute to the learning of others.</p>	<ul style="list-style-type: none"> ● Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media ● Communicate information and ideas effectively to multiple audiences using a variety of media and formats ● Develop cultural understanding and global awareness by engaging with learners of other cultures and in other places ● Contribute to project teams to produce original works or solve problems
<p>Creativity and Innovation Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.</p>	<ul style="list-style-type: none"> ● Apply existing knowledge to generate new ideas, products, or processes ● Create original works as a means of personal or group expression ● Use models and simulations to explore complex systems and issues ● Identify trends and forecast possibilities
<p>Research and Information Fluency Students apply digital tools to gather, evaluate, and use information.</p>	<ul style="list-style-type: none"> ● Plan strategies to guide inquiry ● Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media ● Evaluate and select information sources and digital tools based on the appropriateness to specific tasks ● Process data and report results
<p>Digital Citizenship Students understand human, cultural and societal issues related to technology and practice legal and ethical behavior.</p>	<ul style="list-style-type: none"> ● Advocate and practice safe, legal, and responsible use of information and technology ● Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity ● Demonstrate personal responsibility for lifelong learning ● Exhibit leadership for digital citizenship
<p>Technology Operations and Concepts Students demonstrate a sound understanding of technology concepts, systems, and operations.</p>	<ul style="list-style-type: none"> ● Understand and use technology systems ● Select and use applications effectively and productively ● Troubleshoot systems and applications ● Transfer current knowledge to learning of new technologies

ISTE Essential Student Technology Learning Competencies for Pre-K-12 Overview

Strand	Pre-K	Kindergarten
Critical Thinking, Problem Solving and Decision Making	Introduce various technology resources that promote these skills <ul style="list-style-type: none"> ● Students will be introduced to various technology resources available for different tasks 	Introduce various technology resources that promote these skills <ul style="list-style-type: none"> ● Students will be introduced to various technology resources available for different tasks
Communication and Collaboration	Introduce global community and infrastructures to support technology as a tool to communicate <ul style="list-style-type: none"> ● Students recognize technology as a tool ● Students work collaboratively on a given structured task ● Students may participate in a long distance learning experience 	Introduce global community and infrastructures to support technology as a tool to communicate <ul style="list-style-type: none"> ● Students recognize technology as a tool ● Students work collaboratively on a given structured task ● Students may participate in a long distance learning experience
Creativity and Innovation	Introduce various technology tools and applications that can be used in the classroom <ul style="list-style-type: none"> ● Students use basic apps/software to learn how to use an iPad/computer ● Students interact for basic operations ● Students explore interactive technologies (i.e. mobile devices, interactive whiteboard, document cameras) 	Introduce various technology tools and applications that can be used in the classroom <ul style="list-style-type: none"> ● Students use Internet, subscription or purchased resources ● Students use basic painting and drawing applications ● Students type simple text including their name and date ● Students explore interactive technologies (i.e. mobile devices, interactive whiteboard, document cameras)
Research and Information Fluency	Introduce various technology resources and utilize them for simple acquisition of information <ul style="list-style-type: none"> ● Students will be introduced to the Internet as a source of information 	Introduce various technology resources and utilize them for simple acquisition of information <ul style="list-style-type: none"> ● Students will be introduced to the Internet as a source of information
Digital Citizenship	Introduce to appropriate and responsible use of technology <ul style="list-style-type: none"> ● Students begin to understand acceptable interaction with technology ● Students recognize technology 	Introduce to appropriate and responsible use of technology <ul style="list-style-type: none"> ● Students begin to understand acceptable interaction with technology ● Students recognize technology as

	as a tool	a tool ESM
Technology Operations and Concepts	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> • Computer, iPad, software <p>Operations & Navigations</p> <ul style="list-style-type: none"> • Turn on and shut down iPad/computer properly • Start an app/program from desktop icon (double clicking) • Exit/close a program • Use touchpad for control and interaction within a program • Use interactive whiteboard <p>Keyboard Awareness</p> <ul style="list-style-type: none"> • Touching letters, shapes, icons, touch pad 	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> • Computer, laptop, keyboard, click, close-out, shutdown, logon/logoff, screen, double click, user-name, password <p>Operations & Navigations</p> <ul style="list-style-type: none"> • Logging on/off (if applicable) • Turn on and shut down computer properly • Start a program from desktop icon (double clicking) • Exit/close a program • Use input device for control and interaction within a program • Use interactive whiteboard <p>Keyboard Awareness</p> <ul style="list-style-type: none"> • Shift, Enter, Space Bar, Numbers, Letters, Ctrl, Alt, Delete, Punctuation, Backspace, Tab, Trackpad

Grade Level BG Essential Student Technology Learning Competencies, aligned to ISTE Standards

Strand	First Grade	Second Grade
<p>Critical Thinking, Problem Solving and Decision Making</p>	<p>Introduce various technology resources that promote these skills</p> <ul style="list-style-type: none"> ● Students will be introduced to various technology resources available for different tasks <p>Explain ways that technology can be used to solve problems</p> <ul style="list-style-type: none"> ● Examples include cell phones, traffic lights, GPS, etc 	<p>Develop an awareness of appropriate technology resources to help solve problems and assist with assigned tasks</p> <ul style="list-style-type: none"> ● Students perform simple searches using both internet and school provided databases ● Students select appropriate technology tool to accomplish a task ● Students begin to understand technology productivity tools (software/web 2.0 tools) ● Use digital resources to solve problems with assistance from teachers, parents or student partners
<p>Communication and Collaboration</p>	<p>Introduce global community and infrastructures to support technology as a tool to communicate</p> <ul style="list-style-type: none"> ● Students recognize technology as a tool ● Students work collaboratively on a given structured task ● Students will be introduced to the Internet (What is it? What is it used for? How do you navigate/search engines) 	<p>Develop global community and infrastructures to support technology as a tool to communicate</p> <ul style="list-style-type: none"> ● Students work independently or in pairs on computer ● Students participate in a long distance learning and/or writing experience ● Students be introduced to the Internet based communication resources
<p>Creativity and Innovation</p>	<p>Utilize appropriate technologies that support and reinforce classroom instruction as well as increase home-school communications</p> <ul style="list-style-type: none"> ● Students experience streaming video ● Students responsibly navigate within an appropriate website ● Use text, media, art from online sources ● Students will be introduced to basic word processing skills 	<p>Utilize appropriate technologies that support and reinforce classroom instruction as well as increase home-school communications</p> <ul style="list-style-type: none"> ● Students will continue to learn basic word processing skills ● Students experience streaming video ● Students access, select, and use credentialed web-based resources
<p>Research and Information</p>	<p>Introduce various technology resources and utilize them for</p>	<p>Develop knowledge of various technology resources and use them</p>

<p>Fluency</p>	<p>simple acquisition of information</p> <ul style="list-style-type: none"> ● Students will be introduced to the Internet as a source of information ● Students will be introduced to database systems as sources of information 	<p>for simple acquisition of information</p> <ul style="list-style-type: none"> ● Students use sites established by teachers ● Students will be introduced to cut and paste of text and images ● Students will be introduced to graphic organizers applications and/or web tools
<p>Digital Citizenship</p>	<p>Develop appropriate, responsible, and acceptable use of technology</p> <ul style="list-style-type: none"> ● Students display appropriate behaviors while using technology ● Students develop concept of acceptable use ● Be introduced to positive and negative components of Internet ● Describe appropriate and inappropriate uses of technology and consequences of inappropriate use 	<p>Continue to develop responsible and acceptable use of technology and appropriate behaviors while interacting with technology</p> <ul style="list-style-type: none"> ● Students display appropriate behaviors while using technology ● Continue to develop concept of acceptable use ● Continue to develop an awareness of positive and negative components of Internet ● Be introduced to concepts of ownership and copying (plagiarizing)
<p>Technology Operations and Concepts</p>	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> ● Minimize, maximize, scroll, drag, print, window, software, web-based, hardware, save, open, cursor, document, right-click <p>Operations & Navigations</p> <ul style="list-style-type: none"> ● Maximize and minimize windows ● Navigate using a mouse or touch screen ● Print files ● Log-on and off properly ● Turn on and shut down properly ● Navigate in virtual environments (i.e. electronic books) ● Discuss and understand basic care of computer <p>Keyboard Awareness</p> <ul style="list-style-type: none"> ● Cap locks, arrow keys, delete 	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> ● Network, file name, word processor, text, font, menu, icon, desktop, folder, insert, delete, save, cut, copy, paste, insert, image <p>Operations & Navigations</p> <ul style="list-style-type: none"> ● Handles computer hardware in responsible manner ● Saving and retrieving files ● Basic internet browsing with guidance ● Basic database searches ● Navigate virtual environments (e-books, game websites, etc) <p>Keyboard Awareness</p> <ul style="list-style-type: none"> ● Reinforcement of previous learned skills ● Special Characters

Strand	Third Grade	Fourth Grade
<p>Critical Thinking, Problem Solving and Decision Making</p>	<p>Continue to develop an awareness of appropriate technology resources to help solve problems and assist with assigned tasks</p> <ul style="list-style-type: none"> ● Students perform simple searches using internet and school provided databases ● Students select appropriate technology to accomplish a task ● Students begin to use technology productivity tools 	<p>Introduce appropriate technology resources to help solve problems and assist with assigned tasks</p> <ul style="list-style-type: none"> ● Choose appropriate technology to complete a task ● Use productivity tools for the right task ● Conduct simple searches in school or Internet databases ● Utilize web-based resources and expertise to support problem solving
<p>Communication and Collaboration</p>	<p>Continue to develop global community and infrastructures to support technology as a tool to communicate</p> <ul style="list-style-type: none"> ● Students participate in a long distance learning experience ● Students develop internet based communication resources ● Students work independently or in pairs on computers 	<p>Introduce the idea of participation in global community and infrastructures that support technology as a tool to communicate information</p> <ul style="list-style-type: none"> ● Students will be introduced to various Internet based communication tools (e.g. Skype, Tandberg, Facetime, Hangouts) ● Students experience distance learning environment and/or conduct online collaboration with peers ● Begin to share and collaborate on files and documents with students through online resources
<p>Creativity and Innovation</p>	<p>Continue to utilize appropriate technologies that support and reinforce classroom instruction as well as home-school communications</p> <ul style="list-style-type: none"> ● Students develop basic word processing skills ● Students experience streaming video ● Students access and select credentialed web-based resources ● Students will be introduced to graphic organization tools ● Students use drawing software to develop visual projects ● Use digital tools to learn, create 	<p>Refine, extend and apply use of appropriate technologies that support and reinforce classroom instructions as well as home-school communication</p> <ul style="list-style-type: none"> ● Students will be introduced to basic spreadsheet skills ● Students will be introduced to basic presentation software skills ● Students continue to develop basic word processing skills ● Students develop use of graphic organization tools ● Use digital tools to learn, create and convey original ideas or illustrate concepts ● Use a variety of technologies to

	<p>and convey original ideas or illustrate concepts</p> <ul style="list-style-type: none"> ● Use a variety of technologies to demonstrate creativity and innovation by creating or modifying works of art, music, movies or presentations. ○ Produce a media rich digital project aligned to state curriculum standards. 	<p>demonstrate creativity and innovation by creating or modifying works of art, music, movies or presentations.</p> <ul style="list-style-type: none"> ○ Produce a media rich digital project aligned to state curriculum standards.
<p>Research and Information Fluency</p>	<p>Continue to develop knowledge of various technology resources and use them for simple acquisition of information</p> <ul style="list-style-type: none"> ● Students use teacher created bookmarks to find information ● Students perform simple searches in school/Internet databases ● Students launch a browser and use toolbar ● Use digital tool to find, organize, analyze, synthesize and evaluate information 	<p>Continue to develop knowledge of various technology resources and use them for simple acquisition of information</p> <ul style="list-style-type: none"> ● Students conduct simple searches in internet and school provided databases ● Students move towards independence in conducting database searches ● Students access prescribed Internet sites for information ● Understand and discuss that web sites and digital resources may contain inaccurate or biased information ● Understand that using information from a single Internet source may result in reporting erroneous facts and conclusions.
<p>Digital Citizenship</p>	<p>Refine, extend, and apply responsible and acceptable use of technology and appropriate behaviors while interacting with technology</p> <ul style="list-style-type: none"> ● Students display appropriate behaviors while using technology ● Refine, extend and apply acceptable use ● Refine, extend and apply awareness of positive and negative components of Internet ● Develop concepts of ownership and copying (plagiarism and fair use) ● Discuss scenarios involving 	<p>Refine, extend and apply responsible and acceptable use of technology and appropriate behaviors while interacting with technology</p> <ul style="list-style-type: none"> ● Students display appropriate behaviors while using technology ● Refine, extend and apply acceptable use ● Refine, extend and apply awareness of positive and negative components of Internet ● Continue to develop awareness of: <ul style="list-style-type: none"> ○ Crediting and citing works or other sources ○ Understand copyright issues and properly cite sources ○ Understand benefits and risks of

	<p>acceptable and unacceptable uses of technology</p> <ul style="list-style-type: none"> ● Discuss precautions surrounding online safety (what should and should not be shared online) 	<p>social media</p> <ul style="list-style-type: none"> ● Discuss scenarios involving acceptable and unacceptable uses of technology ● Discuss precautions surrounding online safety (what should and should not be shared online)
<p>Technology Operations and Concepts</p>	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> ● Import, link, url, bookmark, favorites, plagiarism, search engine, button, cut, copy, paste, web 2.0, database <p>Operations & Navigations</p> <ul style="list-style-type: none"> ● Launch and use interactive software either installed on computer or web based ● Bookmark/favorites ● Internet searching ● Word Processing (Importing other files, cut, copy/paste, bullets, numbering, spellcheck) <p>Keyboard Awareness</p> <ul style="list-style-type: none"> ● Page up, page down, tab key 	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> ● Spreadsheet, cells, rows, columns, data, charts, presentation software, fields <p>Operations & Navigations</p> <ul style="list-style-type: none"> ● Create folders ● Manage personal docs ● Use basic spreadsheet skills ● Work with windows, icons, apps, menus, web pages <p>Keyboard Awareness:</p> <ul style="list-style-type: none"> ● Introduce home row keys and proper techniques

Strand	Fifth Grade	Sixth Grade
<p>Critical Thinking, Problem Solving and Decision Making</p>	<p>Develop knowledge of technology resources to help solve problems and assist with assigned tasks</p> <ul style="list-style-type: none"> ● Students continue to develop analysis skills to select appropriate resources ● Students refine search and analysis skills ● Students engage in peer review to assist with decision making and problem solving ● Students utilize media, video, and audio technologies to solve problems, present solutions and make informed decisions 	<p>Refine, extend and apply knowledge of technology resources to help solve problems and assist with assigned tasks</p> <ul style="list-style-type: none"> ● Students utilize a wide range of media and productivity tools ● Students engage in peer review to assist with decision making and problem solving ● Students discern bias and reliability of websites and critically evaluate the quality and reliability of the content ● Evaluate available digital resources and select most appropriate tool to accomplish specific task ● Describe strategies for solving routine hardware and software problems
<p>Communication and Collaboration</p>	<p>Become a part of the global community through responsible use of technology communication resources</p> <ul style="list-style-type: none"> ● Students integrate media into presentation ● Students conduct online collaboration with peers or subject matter experts ● Students engage in online discussions to increase cultural and perspective diversity ● Continue to share and collaborate on files and documents with students through online resources 	<p>Continue to become part of global community through responsible use of technology communication resources</p> <ul style="list-style-type: none"> ● Students understand elements of good web design and navigation ● Students integrate media into presentations ● Students conduct online collaboration with peers or subject matter experts
<p>Creativity and Innovation</p>	<p>Refine, extend and apply use of appropriate technologies that support and reinforce classroom instructions as well as home-school communications</p> <ul style="list-style-type: none"> ● Students continue to build on spreadsheet and presentation skills ● Students access streaming video ● Students use graphic organization tools 	<p>Become proficient in use of appropriate technologies that support and reinforce classroom instructions as well as home-school communications</p> <ul style="list-style-type: none"> ● Students move towards proficiency with spreadsheet, word processing, and presentation tools ● Students utilize internet, subscription or purchased resources

<p>Research and Information Fluency</p>	<p>Refine, extend and apply use of technology resources for acquisition of information</p> <ul style="list-style-type: none"> ● Students utilize online communications tools ● Students utilize and develop spreadsheets to organize and help analyze information 	<p>Begin to become proficient in use of technology resources for acquisition of information</p> <ul style="list-style-type: none"> ● Students will independently use prescribed Internet search engines and school provided databases for research purposes
<p>Digital Citizenship</p>	<p>Refine, extend and apply responsible and acceptable use of technology and appropriate behaviors while interacting with technology</p> <ul style="list-style-type: none"> ● Students display appropriate behaviors while using technology ● Refine, extend and apply acceptable use ● Refine, extend and apply awareness of positive and negative components of Internet ● Continue to develop awareness of: <ul style="list-style-type: none"> ○ Crediting and citing works or other sources ○ Prohibitions of downloading ○ Proper online etiquette ○ Understand copyright issues and properly cite sources ○ Understand benefits and risks of social media 	<p>Become proficient in understanding and practicing responsible and acceptable use of technology and appropriate behaviors while interacting with technology</p> <p>Students continue to develop and understanding of:</p> <ul style="list-style-type: none"> ● Crediting and citing works or other resources ● Concepts of plagiarism, proper citation, fair use ● Prohibitions or limitations of downloading ● Proper online etiquette ● Internet safety issues and cyber bullying ● Ramifications of questionable online behavior (posting pictures, making threats, etc) ● Discuss scenarios involving acceptable and unacceptable uses of technology ● Discuss precautions surrounding online safety (what should and should not be shared online)
<p>Technology Operations and Concepts</p>	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> ● Spreadsheet formulas, charts, video conferencing, help menu, media, web 2.0 simulations, mobile devices, video camera <p>Operations & Navigations</p> <ul style="list-style-type: none"> ● Should be proficient in use of computers and peripherals, locating, managing and accessing files ● Understand and discuss how assistive technologies can benefit all individuals <p>Keyboard Awareness</p> <ul style="list-style-type: none"> ● Continue practice in home row 	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> ● Research database, acceptable use policy, virus, Internet safety <p>Operations & Navigations</p> <ul style="list-style-type: none"> ● Use of productivity applications (word processing, spreadsheet and presentation) ● Use of online instructional tools ● Understand and discuss how assistive technologies can benefit all individuals <p>Keyboard Awareness</p> <ul style="list-style-type: none"> ● Continue practice in home row keys and proper techniques

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Strand	7th-8th Grade	9th-12th Grade
<p>Critical Thinking, Problem Solving and Decision Making</p>	<p>Become proficient in knowledge of technology resources to help solve problems and assist with assigned tasks</p> <ul style="list-style-type: none"> ● Students collaborate with peers, experts, and others to compile, organize, and analyze information to make informed decisions 	<p>Become proficient in knowledge of technology resources to help solve problems and assist with assigned tasks</p> <ul style="list-style-type: none"> ● Students use digital resources (e.g. educational software, online simulations, models) for problem solving and independent learning ● Students use content specific software and simulations (e.g. science probes, graphic calculators, virtual manipulatives, web tools, music composition software, mathematics modeling) to support learning and research ● Students analyze the capabilities and limitations of digital resources and evaluate their potential to address personal, social, lifelong learning, and career needs ● Students devise research question or hypothesis using information and communication technology resources, analyze the findings to make a decision based on the findings, and report the results
<p>Communication and Collaboration</p>	<p>Continue to become part of global community through responsible use of technology communication resources</p> <ul style="list-style-type: none"> ● Students will be introduced to email and social media use ● Use digital resources (discussion groups, blogs, social media) to collaborate with peers, experts and other resources ● Use collaborative digital tools to explore common curriculum content with learners from other cultures ● Identify effective technology uses to support communication with peers, family or school staff 	<p>Become part of the global community through responsible use of technology communication</p> <ul style="list-style-type: none"> ● Students identify various collaboration technologies and describe their use (e.g. video conferencing, webinar, blog, wiki, Social Learning Networks (Edmodo, Schoology), Google Drive) ● Students use collaboration technologies to communicate/collaborate with peers and teachers on classroom assignments and projects ● Students collaborate in content-related projects that integrate a variety of media (e.g. text, audio, video, images, simulations, models) ● Students plan and implement a

		<p>collaborative project using telecommunication tools (e.g., video conferencing, Google Hangouts, Skype, discussion boards)</p> <ul style="list-style-type: none"> ● Students will be able to describe potential risks and dangers associated with online communications ● Students will be able to use technology tools for managing and communicating personal information (e.g. contact information, finances, schedules, purchases, correspondence) ● Students collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, and produce and disseminate information, models and other creative works ● Describe risks and dangers associated with online/digital communications
<p>Creativity and Innovation</p>	<p>Continue to be proficient in use of appropriate technologies that support and reinforce classroom instructions as well as home school communication</p> <ul style="list-style-type: none"> ● Students become proficient in use of spreadsheet, word processing and presentation tools ● Students independently utilize Internet subscription or purchased resources ● Students will be introduced to web languages ● Illustrate a content-related concept using a model, simulation or concept mapping software 	<p>Continue to become proficient in understanding and practicing responsible and acceptable use of technology and appropriate behaviors while interacting with technology</p> <ul style="list-style-type: none"> ● Students apply advanced software features (e.g. templates, styles, charts, graphs, import or embedded multi-media, etc.) to redesign the appearance of word processing documents, spreadsheets, and presentations ● Students use a variety of media and formats to design develop, publish, and present projects (e.g. newsletters, brochures, websites, presentations, video productions, podcasts, spreadsheets)
<p>Research and Information Fluency</p>	<p>Continue to become proficient in use of technology resources for acquisition of information</p> <ul style="list-style-type: none"> ● Students begin to understand the use of online communication 	<p>Become proficient in use of technology resources for acquisition of information</p> <ul style="list-style-type: none"> ● Students develop a plan to gather information using various research

	<p>tools to acquire information</p> <ul style="list-style-type: none"> ● Students understand the meaning of different domain names ● Students independently use search engines and databases for research purposes ● Evaluate information from online information resources for accuracy and bias ● Utilize data collection technologies (probes, handheld devices, GPS, iPods) to assist in a content related problem 	<p>strategies and tools (e.g. online surveys and forms, databases, video conferences, webinars)</p> <ul style="list-style-type: none"> ● Students identify, evaluate and select appropriate online sources and/or peer reviewed journals to answer content related questions ● Students demonstrate using the library and online databases for accessing information ● Students evaluate information found in selected online sources on the basis of accuracy and validity ● Students understand that using information from a single internet source might result in the reporting of erroneous facts and that multiple sources must always be research ● Research examples of inappropriate uses of technologies and participate in related classroom activities (debates, presentations, etc)
<p>Digital Citizenship</p>	<p>Continue to become proficient in understanding and practicing responsible and acceptable use of technology and appropriate behaviors while interacting with technology</p> <ul style="list-style-type: none"> ● Students display appropriate behavior while interacting with technology systems ● Students abide by rules and laws of fair use, copyright, and citation ● Students understand internet safety and cyber bullying issues while on the internet ● Discuss security issues related to e-commerce ● Use technology to identify and explore personal pursuits, lifelong learning and careers. ● Understand how assistive technology can benefit all individuals 	<p>Continue to become proficient in understanding and practicing responsible and acceptable use of technology and appropriate behaviors while interacting with technology</p> <ul style="list-style-type: none"> ● Students identify legal and ethical issues related to the use of information and communication technologies (e.g. properly selecting and citing resources). ● Students discuss possible long-range effects of unethical uses of technology (e.g. breaking copyright laws, possible fines, viruses, software piracy, hacking) on cultures and society and know how to report such uses ● Students discuss and demonstrate proper “Netiquette” in online communications, including awareness of cyber bullying ● Students discuss and adhere to fair use policies and copyright guidelines ● Identify ways that individuals can

		protect their technology systems from unethical users
Technology Operations and Concepts	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> • Ergonomics, virtual environment, cloud <p>Operations & Navigations</p> <ul style="list-style-type: none"> • Use online instructional and navigational tools • Make informed decisions among technology systems, resources and services • Identify file formats for a variety of applications (.docs, .xls, .pdf, txt, jpg, mp3, etc) • Perform queries on databases • Use accurate technology terminology <p>Keyboard Awareness</p> <ul style="list-style-type: none"> • Continue practice in home row keys and proper techniques 	<p>Instructional Vocabulary</p> <ul style="list-style-type: none"> • Online learning, assistive technology, freeware, shareware, open source, commercial software, netiquette, graphic file formats <p>Operations & Navigations</p> <ul style="list-style-type: none"> • Students use an online tutorial and discuss the benefits and disadvantages of this method of learning • Students explore career opportunities, especially those related to science, technology, engineering, and mathematics and identify their related technology skill requirements • Students identify an example of an assistive technology and describe its potential purpose and use • Students participate in a virtual environment as a strategy to build 21st Century Learning Skills • Students assess and solve hardware and software problems by using online help or other user documentation • Students participate in experiences associated with technology related careers • Students will be able to identify common graphic, audio, and video file formats (e.g., jpeg, gif, bmp, mpeg, wav, avi, MP3, MP4, PDF) • Students demonstrate how to import/export text, graphics, or audio files <p>Keyboard Awareness</p> <ul style="list-style-type: none"> • Continue practice in home row keys and proper techniques

Focus Area 2: Professional Development

Outcome: By June 2020 all staff will have the skills and knowledge they need to integrate technology into teaching and learning. There will be a focus on “modification” and “redefinition” of technology integration within the framework of LINKS.

Background

Professional Development (PD) empowers teachers to continually strengthen their practice to better meet the learning needs of all students. Professional Development for technology will include

We are committed to providing multiple options for staff to gain the skills and competencies they need to design, implement and assess learning experiences to engage students and improve learning.

The traditional classroom based model of staff development has its place, but there are many other models that work as well. Flipped PD, webinars, document based learning, mentoring, among others, all provide options for different kinds of learners.

Professional Development within the Bainbridge-Guilford Central School District is organized and delivered through the LINKS Team. LINKS is a teacher-led framework through which targeted professional development is created, and provided, by Bainbridge-Guilford staff.

LINKS Goals include:

1. Continue to foster a community of professionals that can share information.
2. Organize and deliver professional development focused on: literacy in the content area prioritizing writing instruction, student focus in the academic setting, student anxiety, and teaching/ learning in an impoverished community.
3. Evaluate, adjust, and effectively utilize formative and summative assessments to inform instruction.

Technology Professional Development will take place within this framework to the extent where ***technology can be integrated into, and enhance, instruction.*** The evaluation of technology enhancing instruction will follow the SAMR model.

SAMR stands for:

- Substitution – technology acts as a direct tool substitute, with no functional change
- Augmentation – technology acts as a direct tool substitute, with functional improvement
- Modification – technology allows for significant task redesign
- Redefinition – technology allows for creation of new tasks previously inconceivable

The model indicates that the power of integration is gained through focusing integration efforts on modification and redefinition of learning tasks. By doing so, student learning becomes more student centered as opposed to teacher centered, as well as more highly engaging and rigorous. Below is a more detailed explanation with a learning example from Dr. Puentedura.

Level	Definition	Examples	Functional Change
Substitution	Computer technology is used to perform the same task as was done before the use of computers.	Students print out worksheet, finish it, pass it in.	No functional change in teaching and learning. There may well be times when this the appropriate level of work as there is no real gain to be had from computer technology. One needs to decide computer use based on any other possible benefits. This area tends to be teacher centric where the instructor is guiding all aspects of a lesson.
Augmentation	Computer Technology offers an effective tool to perform common tasks.	Students take a quiz using a Google Form instead of using pencil and paper.	There is some functional benefit here in that paper is being saved, students and teacher can receive almost immediate feedback on student level of understanding of material. This level starts to move along the teacher / student centric continuum. The impact of immediate feedback is that students may begin to become more engaged in learning.
Level	Definition	Examples	Functional Change
Modification	This is the first step over the line between	Students are asked to write an essay around the	There is significant functional change in the classroom. While all students are learning similar writing skills, the

	<p>enhancing the traditional goings-on of the classroom and transforming the classroom. Common classroom tasks are being accomplished through the use of computer technology.</p>	<p>theme "And This I Believe...". An audio recording of the essay is made along with an original musical soundtrack. The recording will be played in front of an authentic audience such as parents, or college admission counselors.</p>	<p>reality of an authentic audience gives each student has a personal stake in the quality of the work. Computer technology is necessary for this classroom to function allowing peer and teacher feedback, easy rewriting, and audio recording. Questions about writing skills increasingly come from the students themselves.</p>
<p>Redefinition</p>	<p>Computer technology allows for new tasks that were previously inconceivable .</p>	<p>A classroom is asked to create a documentary video answering an essential question related to important concepts. Teams of students take on different subtopics and collaborate to create one</p>	<p>At this level, common classroom tasks and computer technology exist not as ends but as supports for student centered learning. Students learn content and skills in support of important concepts as they pursue the challenge of creating a professional quality video. Collaboration becomes necessary and technology allows such communications to occur. Questions and discussion are increasingly student generated.</p>

		final product. Teams are expected to contact outside sources for information.	
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Expectations for Students and Adults

Students: Adopt and implement new technologies in their learning Adults:

- Facilitate and inspire student learning and creativity
- Design and develop digital age learning experiences and assessments
- Model digital age work and learning
- Promote and model digital citizenship and responsibility
- Engage in professional growth and leadership

Action Steps

2016-2017

1) Integrate the “SAMR” (Substitution, Augmentation, Modification, Redefinition) model for highly effective technology integration professional development. Develop differentiated professional development offerings for technology integration and align it with the 2015-2016 professional development plan and budget. Tasks for this action step include:

- Introduce “SAMR” at the district wide 2016 Superintendent’s conference day
- Work with staff to help them assess their technology use along the SAMR continuum
- In all PD offerings help staff plan technology integration that focuses on “modification” and “redefinition”

- Keep a focus on the needs of Special Education and English language learners since their needs may differ.

2) Develop an implementation plan for student competencies in alignment with the Strategic Plan.

Prior to implementation, teachers will be introduced to and educated about the expectations of the student technology learning competencies. Professional development will be provided for teachers to assist in integrating technology effectively into their existing curriculum so students of all levels, including Special Education and English Language Learners, meet the required mastery level. Use of a technology self-assessment tool will assist in developing technology professional development. Strategies include:

- Overview and assistance on August 2016-2017 Superintendent's days
- Review at grade level and/or department meetings and faculty meetings
- Integration into all Professional Development offerings
- Reinforcement through Instructional Technology Specialist coaching, modeling, emails and web pages.
- Coordination with the Committee on Special Education for student Individual Education Plans (IEP) and Transition Plan alignment.

We will offer professional development opportunities through

- Job-embedded modeling and support
- Peer sharing
- In-person workshops
- Flipped workshops
- Webinars
- In-person small group settings
- Web-based resource collections

- Model teaching by Instructional Technology Specialist
- Informal Peer Mentoring
- New teacher induction

2017-2018

Implement Professional Development in collaboration with LINK that is directly aligned with the Bainbridge-Guilford Technology Vision.

2018-2019

Review and adjust action steps as appropriate

2019-2020

Begin Planning for 2021-2025 Technology Plan.

Focus Area 3: Technology Infrastructure to Support Student Learning

We have 1 GB of network bandwidth (coming into the district), 100 MB of internal network bandwidth (connections between school buildings), and 1 GB of wired bandwidth connections within school buildings. This was upgraded in summer of 2015 - ask Ed.

Goal: Increase all bandwidths to 1GB.

Currently, about 75% of the district has access to wireless. Trouble spots include the Guilford building, the high school tech building, and near high school rooms 106 and 108. Slow wireless has been reported in a few places.

Goal: 100% wireless access through an increase in wireless access points. If we get 1-to-1 devices for students, it is strongly recommended that we have wireless access points in every single classroom.

Technology Available:

- 300 desktop computers
- 165 laptop computers
- 50 iPads
- 30 document cameras
- Smartboards
- Projectors
- Scanners
- Printers
- 40 iPods
- 100 turning point clickers

We are on a 5 year replacement rotation of desktop and laptop computers, which is standard.

Greenlawn: 1 computer classroom, 1 laptop cart

Junior-Senior High: 1 computer lab, 2 computer classrooms, 3.5 laptop carts

Goal: Increase student access to technology by increasing number of mobile devices.

Focus Area 4: IT Support

Bainbridge-Guilford will have staffing and support in place for all its technology so that installation, repair and research for technology is completed by students, and staff.

Expectations for Students and Adults

Students:

Provide suggestions and ideas about improving the IT support and installation process. Use equipment responsibly and in a way that minimizes the need for repairs and downtime.

Staff:

Provide suggestions and ideas about improving the IT support and installation process. Educate students in the proper use of technology so as to minimize downtime of technology assets.

Action Steps

2016-2017:

1) Create staffing and support system recommendations, aligned to the equipment and infrastructure plan, for development of the 2015-2016 budget.

Detail: Analyze current devices that BG supports, as well as future technology implementations. Tasks include:

- Create a Service Level Agreement with BG students, staff, parents and administration for repairs and new technology implementations.
- Align District tech department staffing to achieve the service level agreement
- Analyze building based support for applicability and efficiency
- Review current job descriptions and roles, and adjust as necessary
- Review staffing each year during the budget cycle in light of changes to support needs

2017-2018

1) Develop device deployment processes that have a predefined scope with agreed upon implementation deadlines.

The desired state is to deploy equipment so it is in student and staff hands shortly after it is purchased, possibly by use of prep/deploy teams. In addition, we need to keep in mind the unique needs of Students with Disabilities and English Language Learners as deployment schedules are finalized.

3) Review 2016-2017 Action Steps for revisions as necessary with alignment to device, infrastructure and support needs.

2016-2017

1) Review each of the previous year action plans and update as necessary.

2017-2018

1) Begin planning for 2018-2022 Technology Plan.

Results By June 2020

Support Staff aligned to BOCES agreement

Device/ project deployment occurs in a predictable, intentional, and agreed upon manner

2021-2025 Technology Plan completed

