Orange Township Public Schools

Technology Handbook

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Lessoning Plan Procedures

1. Conference held with Technology Coordinator and teacher.

2. Teacher identifies topic

3. Technology Coorinator and teacher brainstorm on lesson

4. Selection of dates

5. Technology Coordinator will assist with the lesson plan and identify possible lesson technology projects and websites to address lesson topic.

6. Technology Coordinator will model lesson for teacher.

7. Technology Coordinator will do an introduction to lab procedures.

8. Technology Coordinator will prepare worksheets for lesson and prepare lab.

9. Teacher will post websites to webpage for lesson.

10. Teacher will develop final lesson plan and complete seating chart.

Pre-Conference Form

Technology-Supported Lesson Plan

Name:

Content/Grade

Time Required:	**Materials:**
Enter time required to teach complete lesson	List all necessary materials including technology-based items
Common Core Standards:	**NJ Tech Standards & NET Standards:**
Enter each standard and its supporting performance indicator(s)	Enter each standard and its supporting performance indicator(s)

Lesson Objective(s}: List objective(s)

Technology Is Used to Support Student Learning in the Following Ways:

Describe specifically how technology is incorporated into the lesson and how this supports student learning

How the Teacher Uses Technology:	How the Students Use Technology:
Describe how and when the teacher uses technology in the lesson	Describe how and when students use technology in the lesson

Classroom Management Techniques:

Explain accommodations made for technology use, student grouping, etc.

Preparation Before Class:

List all tasks to be completed prior to lesson

Introduction to the Lesson: Enter text here

Instruction: Enter text here

Guided Activity: Enter text here

: Independent Activity: Enter text here

Assessment: Enter text here

Lesson Extensions: Enter text here

2016

ISTE STANDARDS

FOR STUDENTS

The 2016 ISTE Standards for Students emphasize the skills and qualities we want for students, enabling them to engage and thrive in a **connected, digital world. The standards are designed for use by educators across the curriculum, with every age student, with a goal of cultivating these skills throughout a student's academic career. Both students and teachers will be responsible for achieving foundational technology skills to fully apply the standards. The reward, however, will be educators who skillfully mentor and inspire students to amplify learning with technology and challenge them to be agents of their own learning.**

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. Students:

a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

b. build networks and customize their learning environments in ways that support the learning process.

c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

d. understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

2. Digital Citizen

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical. Students:

a. cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.

b. engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

c. demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

d. manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

3. Knowledge Constructor

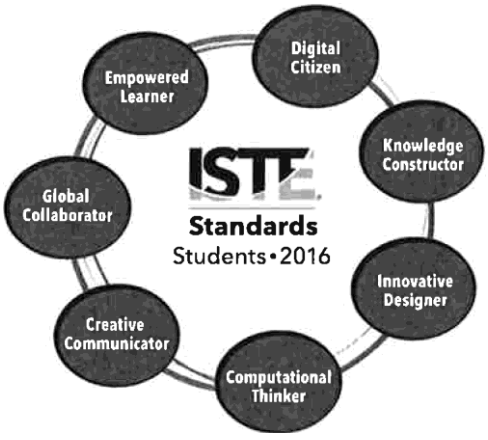
Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others. Students:

a. plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

b. evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.

c. curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

d. build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.



4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions. Students:

a. . know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.
b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
c. develop, test and refine prototypes as part of a cyclical design process.
d. exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals. Students

a. choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.
b. create original works or responsibly repurpose or remix digital resources into new creations.
c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.
d. publish or present content that customizes the message and medium for their intended audiences.

5. Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. Students:

a. formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.
b. 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.
c. break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.
d. understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

7. Global Collaborator

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally. Students:

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.
b use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.
c. contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.
d. explore local and global issues and use collaborative technologies to work with others to investigate solutions.

ISTE

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ISTE
Standards

International Society for
Technology in Education

ISTE Standards
Teacher

Effective teachers model and apply the ISTE Standards for Students (Standards•S) as they design, implement, and assess learning experiences to engage students and improve learning; enrich professional practice; and provide positive models for students, colleagues, and the community. All teachers should meet the following standards and performance indicators.

1. Facilitate and inspire student learning and creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.

a. Promote, support, and model creative and innovative thinking and inventiveness

b. Engage students in exploring real-world issues and solving authentic problems using digital tools and resources

c. Promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes

d. Model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments

2. Design and develop digital age learning experiences and assessments

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the Standards•S.

a. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity

b. Develop technology-enriched learning environments that enable **all** students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress

c. Customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources

d. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards, and use resulting data to inform learning and teaching

3. Model digital age work and learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

a. Demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations

b. Collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation

c. Communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital age media and formats

d. Model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning

4. Promote and model digital citizenship and responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.

a. Advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources

b. Address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources

c. Promote and model digital etiquette and responsible social interactions related to the use of technology and information

d. Develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital age communication and collaboration tools

5. Engage in professional growth and leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.

a. Participate in local and global learning communities to explore creative applications of technology to improve student learning

b. Exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others

c. Evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning

d. Contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community

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ISTE Standards

International Society for Technology in Education

ISTE Standards
Administrators

1. Visionary leadership

Educational Administrators inspire and lead development and implementation of a shared vision for comprehensive integration of technology to promote excellence and support transformation throughout the organization.

a. Inspire and facilitate among all stakeholders a shared vision of purposeful change that maximizes use of digital-age resources to meet and exceed learning goals, support effective instructional practice, and maximize performance of district and school leaders

b. Engage in an ongoing process to develop, implement, and communicate technology-infused strategic plans aligned with a shared vision

c. Advocate on local, state and national levels for policies, programs, and funding to support implementation of a technology-infused vision and strategic plan

2. Digital age learning culture

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

a. Ensure instructional innovation focused on continuous improvement of digital-age learning

b. Model and promote the frequent and effective use of technology for learning

c. Provide learner-centered environments equipped with technology and learning resources to meet the individual, diverse needs of all learners

d. Ensure effective practice in the study of technology and its infusion across the curriculum

e. Promote and participate in local, national, and global learning communities that stimulate innovation, creativity, and digital age collaboration

3. Excellence in professional practice

Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources.

a. Allocate time, resources, and access to ensure ongoing professional growth in technology fluency and integration

b. Facilitate and participate in learning communities that stimulate, nurture and support administrators, faculty, and staff in the study and use of technology

c. Promote and model effective communication and collaboration among stakeholders using digital age tools

d. Stay abreast of educational research and emerging trends regarding effective use of technology and encourage evaluation of new technologies for their potential to improve student learning

4. Systemic improvement

Educational Administrators provide digital age leadership and management to continuously improve the organization through the effective use of information and technology resources.

a. Lead purposeful change to maximize the achievement of learning goals through the appropriate use of technology and media-rich resources

b. Collaborate to establish metrics, collect and analyze data, interpret results, and share findings to improve staff performance and student learning

c. Recruit and retain highly competent personnel who use technology creatively and proficiently to advance academic and operational goals

d. Establish and leverage strategic partnerships to support systemic improvement

e. Establish and maintain a robust infrastructure for technology including integrated, interoperable technology systems to support management, operations, teaching, and learning

5. Digital citizenship

Educational Administrators model and facilitate understanding of social, ethical and legal issues and responsibilities related to an evolving digital culture.

a. Ensure equitable access to appropriate digital tools and resources to meet the needs of all learners

b. Promote, model and establish policies for safe, legal, and ethical use of digital information and technology

c. Promote and model responsible social interactions related to the use of technology and information

d. Model and facilitate the development of a shared cultural understanding and involvement in global issues through the use of contemporary communication and collaboration tools

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2014 New Jersey Core Curriculum Content Standards - Technology

Content Area	Technolo!v		
Standard	8.1Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowled2e.		
Strand	A. Technology Operations and Concepts: *Students demonstrate a sound understanding of technology concepts, systems and operations.*		
Grade Level bands	Content Statement Students will:	Indicator	Indicator
p	Understand and use technology systems.	8.1.P.A.l	Use an input device to select an item and navigate the screen
		8.1.P.A.2	Navigate the basic functions of a browser.
	Select and use applications effectively and productively.	8.1.P.A.3	Use digital devices to create stories with pictures, numbers, letters and words.
		8.1.P.A.4	Use basic technology terms in the proper context in conversation with peers and teachers (e.g., camera, tablet, Internet, mouse, keyboard, and printer).
		8.1.P.A.5	Demonstrate the ability to access and use resources on a computing device.
K-2	Understand and use technology systems.	8.1.2.A.l	Ldentify the basic features of a digital device and explain its purpose.
	Select and use applications effectively and productively.	8.1.2.A.2	Create a document using a word processing application.
		8.1.2.A.3	Compare the common uses of at least two different digital applications and identify the advantages and disadvantages of using each.
		8.1.2.A.4	Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games, museums).
		8.1.2.A.5	Enter information into a spreadsheet and sort the information.
		8.1.2.A.6	Identify the structure and components of a database.
		8.1.2.A.7	Enter information into a database or spreadsheet and filter the information.
3-5	Understand and use technology systems.	8.1.5.A.l	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
	Select and use applications effectively and productively.	8.1.5.A.2	Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures.
		8.1.5.A.3	Use a graphic organizer to organize information about problem or issue.
		8.1.5.A.4	Graph data using a spreadsheet, analyze and produce a report that explains

			the analysis of the data.
		8.1.5.A.5	Create and use a database to answer basic questions.
		8.1.5.A.6	Export data from a database into a spreadsheet; analyze and produce a report that explains the analysis of the data.
6-8	Understand and use technology systems.	8.1.8.A.1	Demonstrate knowledge of a real world problem using digital tools.
	Select and use applications effectively and productively.	8.1.8.A.2	Create a document (e.g. newsletter, reports, personalized learning plan, business letters or flyers) using one or more digital applications to be critiqued by professionals for usability.
		8.1.8.A.3	Use and/or develop a simulation that provides an environment to solve a real world problem or theory.
		8.1.8.A.4	Graph and calculate data within a spreadsheet and present a summary of the results
		8.1.8.A.5	Create a database query, sort and create a report and describe the process, and explain the report results.
9-12	Understand and use technology systems.	8.1.12.A.1	Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.
	Select and use applications effectively and productively.	8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.
		8.1.12.A.3	Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.
		8.1.12.A.4	Construct a spreadsheet workbook with multiple worksheets, rename tabs to reflect the data on the worksheet, and use mathematical or logical functions, charts and data from all worksheets to convey the results.
		8.1.12.A.5	Create a report from a relational database consisting of at least two tables and describe the process, and explain the report results.

Content Area	Tecbnoloe:v		
Standard	8.1Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowled2e.		
Strand	B. Creativity and Innovation: *Students demonstrate creative thinking, construct knowledge and develop innovative products and process usinf! technolof!V.*		
Grade Level	Content Statement Students will:	Indicator	Indicator

bands			
p	Apply existing knowledge to generate new ideas, products, or processes. Create original works as a means of personal or group expression.	8.1.P.B.1	Create a story about a picture taken by the student on a digital camera or mobile device.
K-2		8.1.2.B.1	Illustrate and communicate original ideas and stories using multiple digital tools and resources.
3-5		8.1.5.B.1	Collaborative to produce a digital story about a significant local event or issue based on first-person interviews.
6-8		8.1.8.B.1	Synthesize and publish information about a local or global issue or event (ex. telecollaborative project, blo!!, school web).
9-12		8.1.12.B.2	Apply previous content knowledge by creating and piloting a digital learning game or tutorial.

Content Area	Technolol!V
Standard	8.1Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowled2e.
Strand	C. Communication and Collaboration: *Students use digital media and environments to communicate and work collaboratively, includinR at a distance, to suvvort individual learnin and contribute to the learnin of others.*

Grade Level bands	Content Statement	Indicator	Indicator
p	Interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media. Communicate information and ideas to multiple audiences using a variety of media and formats. Develop cultural understanding and global awareness by engaging with learners of other cultures. Contribute to project teams to produce original works or solve problems.	8.1.P.C.1	Collaborate with peers by participating in interactive digital games or activities.
K-2		8.1.2.C.1	Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.
3-5		8.1.5.C.1	Engage in online discussions with learners of other cultures to investigate a worldwide issue from multiple perspectives and sources, evaluate findings and present possible solutions, using digital tools and online resources for all steps.
6-8		8.1.8.C.1	Collaborate to develop and publish work that provides perspectives on a global problem for discussions with learners from other countries.
9-12		8.1.12.C.1	Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.

Content Area	Technolol!v

Standard	8.1Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowled!!e.
Strand	D. Digital Citizenship: *Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.*

Grade Level bands	Content Statement	Indicator	Indicator
K-2	Advocate and practice safe, legal, and responsible use of information and technoJogv.	8.1.2.D.1	Develop an understanding of ownership of print and nonprint information.
3-5	Advocate and practice safe, legal, and responsible use of information and technology.	8.1.5.D. l	Understand the need for and use of copyrights.
		8.1.5.D.2	Analyze the resource citations in online materials for proper use.
	Demonstrate personal responsibility for lifelong learning.	8.1.5.D.3	Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media.
	Exhibit leadership for digital citizenship.	8.1.5.D.4	Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
6-8	Advocate and practice safe, legal, and responsible use of information and technology.	8.1.8.D.1	Understand and model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media.
	Demonstrate personal responsibility for lifelong learning.	8.1.8.D.2	Demonstrate the application of appropriate citations to digital content.
		8.1.8.D.3	Demonstrate an understanding of fair use and Creative Commons to intellectual property.
	Exhibit leadership for digital citizenship.	8.1.8.D.4	Assess the credibility and accuracy of digital content.
		8.1.8.D.5	Understand appropriate uses for social media and the negative consequences of misuse.
9-12	Advocate and practice safe, legal, and responsible use of information and technology.	8.1.12.D.1	Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.
	Demonstrate personal responsibility for	8.1.12.D.2	Evaluate consequences of unauthorized electronic access (e.g., hacking;)

	lifelong learning.		and disclosure, and on dissemination of personal information.
		8.1.12.D.3	Compare and contrast policies on filtering and censorship both locally and globally.
	Exhibit leadership for digital citizenship.	8.1.12.D.4	Research and understand the positive and negative impact of one's digital footprint.
		8.1.12.D.5	Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.
Content Area	Technolol!v		
Standard	8.1Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledee.		
Strand	E: Research and Information Fluency: *Students apply digital tools to gather, evaluate, and use information.*		
Grade Level bands	Content Statement Students will:	Indicator	Indicator
p	Plan strategies to guide inquiry.	8.1.P.E.1	Use the Internet to explore and investigate questions with a teacher's support.
K-2	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 for specific tasks.	8.1.2.E.1	Use digital tools and online resources to explore a problem or issue.
3-5	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	8.1.5.E.1	Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.

	appropriateness for specific tasks.		
6-8	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 for specific tasks. Process data and report results.	8.1.8.E.1	Effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.
9-12	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 for specific tasks. Process data and report results.	8.1.12.E.1	Produce a position statement about a real world problem by developing a systematic plan of investigation with peers and experts synthesizing information from multiple sources.
		8.1 .12.E.2	Research and evaluate the impact on society of the unethical use of digital tools and present your research to peers.

Content Area	TecbnoloQV
Standard	8.1Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowled1?e.
Strand	F: Critical thinking, problem solving, and decision making: *Students use critical thinking skills topl an and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.*

Grade Level bands	Content Statement Students will:	Indicator	Indicator
K-2	Identify and define authentic problems and significant questions for	8.1.2.F.l	Use geographic mapping tools to plan and solve problems.

	investigation. Plan and manage activities to develop a solution or 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.		
3-5	Identify and define authentic problems and significant questions for investigation. Plan and manage activities to develop a solution or 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	8.1.5 .F.1	Apply digital tools to collect, organize, and analyze data that support a scientific finding.
6-8	Identify and define authentic problems and significant questions for investigation. Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative	8.1.8.F.1	Explore a local issue, by using digital tools to collect and analyze data to identify a solution and make an informed decision.

	solutions.		
9-12	Identify and define authentic problems and significant questions for investigation. Plan and manage activities to develop a solution or 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.	8.1.12.F.1	Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.

2014 New Jersey Core Curriculum Content Standards - Technology

Content Area	Techoolo!!V		
Standard	8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.		
Strand	A. The Nature of Technology: Creativity and Innovation *Technology systems impact every aspect of the world in which we live.*		
Grade Level bands	Content Statement Students will be able to understand:	Indicator	Indicator
K-2	The characteristics and scope of technology.	8.2.2.A.1	Define products produced as a result of technology or of nature.
		8.2.2.A.2	Describe how designed products and systems are useful at school, home and work.
	The core concepts of technology.	8.2.2.A.3	Identify a system and the components that work together to accomplish its purpose.
		8.2.2.A.4	Choose a product to make and plan the tools and materials needed.
	The relationships among technologies and the connections between technology and other fields of study.	8.2.2.A.5	Collaborate to design a solution to a problem affecting the community.
3-5	The characteristics and scope of technology.	8.2.5.A.1	Compare and contrast how products made in nature differ from products that are human made in how they are produced and used.
		8.2.5.A.2	Investigate and present factors that influence the development and function of a product and a system.
	The core concepts of technology.	8.2.5.A.3	Investigate and present factors that influence the development and function of products and systems, e.g., resources, criteria and constraints.
	The relationships among technologies and the connections between technology and other fields	8.2.5.A.4	Compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences.
		8.2.5.A.5	Identify how improvement in the understanding of materials science impacts

	of study.		technologies .
6-8	The characteristics and scope of technology.	8.2.8.A.1	Research a product that was designed for a specific demand and identify how the product has changed to meet new demands (i.e. telephone for communication - smart phone for mobility needs).
	The core concepts of technology.	8.2.8.A.2	Examine a system, consider how each part relates to other parts, and discuss a part to redesign to improve the system.
		8.2.8.A.3	Investigate a malfunction in any part of a system and identify its impacts.
	The relationships among technologies and the connections between technology and other fields of study.	8.2.8.A.4	Redesign an existing product that impacts the environment to lessen its impact(s) on the environment.
		8.2.8.A.5	Describe how resources such as material, energy, information, time, tools, people, and capital contribute to a technological product or system.
9-12	The characteristics and scope of technology.	8.2.12.A.1	Propose an innovation to meet future demands supported by an analysis of the potential full costs, benefits, trade-offs and risks, related to the use of the innovation.
	The core concepts of technology.	8.2.12.A.2	Analyze a current technology and the resources used, to identify the trade-offs in terms of availability, cost, desirability and waste.
	The relationships among technologies and the connections between technology and other fields of study.	8.2.12.A.3	Research and present information on an existing technological product that has been repurposed for a different function.

Content Area	Technolo!!v
Standard	8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
Strand	B. Technology and Society: *Knowledge and understanding of human, cultural and societal values are fundamental when desif!:11inf! technolo; ica/ svstems and products in the lobal society.*

Grade Level bands	Content Statement Students will be able to understand:	Indicator	Indicator

K-2	The cultural, social, economic and political effects of technology.	**8.2.2.B.1**	Identify how technology impacts or improves life.
	The effects of technology on the environment.	**8.2.2.B.2**	Demonstrate how reusing a product affects the local and global environment.
	The role of society in the development and use of technology.	**8.2.2.B.3**	Identify products or systems that are designed to meet human needs.
	The influence of technology on history.	**8.2.2.B.4**	Identify how the ways people live and work has changed because of technology.
3-5	The cultural, social, economic and political effects of technology.	**8.2.5.B.1**	Examine ethical considerations in the development and production of a product through its life cycle.
	The effects of technology on the environment.	**8.2.5.B.2**	Examine systems used for recycling and recommend simplification of the systems and share with product developers.
		8.2.5.B.3	Investigate ways that various technologies are being developed and used to reduce improper use of resources.
	The role of society in the development and use of technology.	**8.2.5.B.4**	Research technologies that have changed due to society's changing needs and wants.
		8.2.5.B.5	Explain the purpose of intellectual property law.
	The influence of technology on history.	**8.2.5.B.6**	Compare and discuss how technologies have influenced history in the past century.
6-8	The cultural, social, economic and political effects of technology.	**8.2.8.B.1**	Evaluate the history and impact of sustainability on the development of a designed product or system over time and present results to peers.
		8.2.8.B.2	Identify the desired and undesired consequences from the use of a product or system.
	The effects of technology on the environment.	**8.2.8.B.3**	Research and analyze the ethical issues of a product or system on the environment and report findings for review by peers and /or experts.
		8.2.8.B.4	Research examples of how humans can devise technologies to reduce the negative

			consequences of other technologies and present your findings.
	The role of society in the development and use of technology.	8.2.8.B.5	Identify new technologies resulting from the demands, values, and interests of individuals, businesses, industries and societies.
		8.2.8.B.6	Compare and contrast the different types of intellectual property including copyrights, patents and trademarks.
	The influence of technology on history.	8.2.8.B.7	Analyze the historical impact of waste and demonstrate how a product is upcycled, reused or remanufactured into a new product.
9-12	The cultural, social, economic and political effects of technology.	8.2.12.B.1	Research and analyze the impact of the design constraints (specifications and limits) for a product or technology driven by a cultural, social, economic or political need and publish for review.
	The effects of technology on the environment.	8.2.12.B.2	Evaluate ethical considerations regarding the sustainability of environmental resources that are used for the design, creation and maintenance of a chosen product.
	The role of society in the development and use of technology.	8.2.12.B.3	Analyze ethical and unethical practices around intellectual property rights as influenced by human wants and/or needs.
	The influence of technology on history.	8.2.12.B.4	Investigate a technology used in a given period of history, e.g., stone age, industrial revolution or information age, and identify their impact and how they may have changed to meet human needs and wants.
		8.2.12.B.5	Research the historical tensions between environmental and economic considerations as driven by human needs and wants in the development of a technological product, and present the competing viewpoints to peers for review.
Content Area	Technolol!V		
Standard	8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.		
Strand	C. Desi2n: *The design process is a systematic aoDroach to solvinf! problems.*		
Grade Level bands	Content Statement Students will be able to understand:	Indicator	Indicator

K-2	The attributes of design.	8.2.2.C.1	Brainstorm ideas on how to solve a problem or build a product.
		8.2.2.C.2	Create a drawing of a product or device that communicates its function to peers and discuss.
		8.2.2.C.3	Explain why we need to make new products.
	The application of engineering design.	8.2.2.C.4	Identify designed products and brainstorm how to improve one used in the classroom.
		8.2.2.C.5	Describe how the parts of a common toy or tool interact and work as part of a system.
	The role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.	8.2.2.C.6	Investigate a product that has stopped working and brainstorm ideas to correct the problem.
3-5	The attributes of design.	8.2.5.C.1	Collaborate with peers to illustrate components of a designed system.
		8.2.5.C.2	Explain how specifications and limitations can be used to direct a product's development.
		8.2.5.C.3	Research how design modifications have lead to new products.
	The application of engineering design.	8.2.5.C.4	Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.
		8.2.5.C.5	Explain the functions of a system and subsystems.
	The role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.	8.2.5.C.6	Examine a malfunctioning tool and identify the process to troubleshoot and present options to repair the tool.
		8.2.5.C.7	Work with peers to redesign an existing product for a different purpose.
6-8	The attributes of design.	8.2.8.C.1	Explain how different teams/groups can contribute to the overall design of a product.
		8.2.8.C.2	Explain the need for optimization in a design process.
		8.2.8.C.3	Evaluate the function, value, and aesthetics of a technological product or system, from the perspective of the user and the producer.
	The application of	8.2.8.C.4	Identify the steps in the design process that would be used to solve a designated

	engineering design.		problem.
		8.2.8.C.5	Explain the interdependence of a subsystem that operates as part of a system.
		8.2.8.C.5.a	Create a technical sketch of a product with materials and measurements labeled.
	The role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.	8.2.8.C.6	Collaborate to examine a malfunctioning system and identify the step-by-step process used to troubleshoot, evaluate and test options to repair the product, presenting the better solution.
		8.2.8.C.7	Collaborate with peers and experts in the field to research and develop a product using the design process, data analysis and trends, and maintain a design log with annotated sketches to record the developmental cycle.
		8.2.8.C.8	Develop a proposal for a chosen solution that include models (physical, graphical or mathematical) to communicate the solution to peers.
9-12	The attributes of design.	8.2.12.C.1	Explain how open source technologies follow the design process.
		8.2.12.C.2	Analyze a product and how it has changed or might change over time to meet human needs and wants.
	The application of engineering design.	8.2.12.C.3	Analyze a product or system for factors such as safety, reliability, economic considerations, quality control, environmental concerns, manufacturability, maintenance and repair, and human factors engineering (ergonomics).
		8.2.12.C.4	Explain and identify interdependent systems and their functions.
		8.2.12.C.5	Create scaled engineering drawings of products both manually and digitally with materials and measurements labeled.
	The role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.	8.2.12.C.6	Research an existing product, reverse engineer and redesign it to improve form and function.
		8.2.12.C.7	Use a design process to devise a technological product or system that addresses a global problem, provide research, identify trade-offs and constraints, and document the process through drawings that include data and materials.
Content Area	Technolo		
Standard	8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.		
Strand	D. Abilities for a Technological World: *The designed world is the product of a design process that provides the means to convert resources into products and sysLems.*		
Grade	Content Statement	Indicator	Indicator
6			

Level bands	Students will understand how to:		
K-2	Apply the design process.	**8.2.2.D.1**	Collaborate and apply a design process to solve a simple problem from everyday experiences.
	Use and maintain technological products and systems.	**8.2.2.D.2**	Discover how a product works by taking it apart, sketching how parts fit, and putting it back together.
		8.2.2.D.3	Identify the strengths and weaknesses in a product or system.
		8.2.2.D.4	Identify the resources needed to create technological products or systems.
	Assess the impact of products and systems.	**8.2.2.D.5**	Identify how using a tool (such as a bucket or wagon) aids in reducing work.
3-5	Apply the design process.	**8.2.5.D.1**	Identify and collect information about a problem that can be solved by technology, generate ideas to solve the problem, and identify constraints and trade-offs to be considered.
		8.2.5.D.2	Evaluate and test alternative solutions to a problem using the constraints and trade-offs identified in the design process to evaluate potentiaJ solutions.
	Use and maintain technological products and systems.	**8.2.5.D.3**	Follow step by step directions to assemble a product or solve a problem.
		8.2.5.D.4	Explain why human-designed systems, products, and environments need to be constantly monitored, maintained, and improved.
		8.2.5.D.5	Describe how resources such as material, energy, information, time, tools, people and capital are used in products or systems.
	Assess the impact of products and systems.	**8.2.5.D.6**	Explain the positive and negative effect of products and systems on humans, other species and the environment, and when the product or system should be used.
		8.2.5.D.7	Explain the impact that resources such as energy and materials used in a process to produce products or system have on the environment.
6-8	Apply the design process.	**8.2.8.D.1**	Design and create a product that addresses a real world problem using a design process under specific constraints.
		8.2.8.D.2	Identify the design constraints and trade-offs involved in designing a prototype (e.g., how the prototype might fail and how it might be improved) by completing a design problem and reporting results in a multimedia presentation, design portfolio or engineering notebook.
		8.2.8.D.3	Build a prototype that meets a STEM-based design challenge using science,

			engineering, and math principles that validate a solution.
	Use and maintain technological products and systems.	8.2.8.D.4	Research and publish the steps for using and maintaining a product or system and incorporate diagrams or images throughout to enhance user comprehension.
	Assess the impact of products and systems.	8.2.8.D.5	Explain the impact ofresource selection and the production process in the development of a common or technological product or system.
		8.2.8.D.6	Identify and explain how the resources and processes used in the production of a current technological product can be modified to have a more positive impact on the environment.
9-12	Apply the design process.	8.2.12.D.1	Design and create a prototype to solve a real world problem using a design process, identify constraints addressed during the creation of the prototype, identify trade-offs made, and present the solution for peer review.
		8.2.12.D.2	Write a feasibility study of a product to include: economic, market, technical, financial, and management factors, and provide recommendations for implementation.
	Use and maintain technological products and systems.	8.2.12.D.3	Determine and use the appropriate resources (e.g., CNC (Computer Numerical Control) equipment, 3D printers, CAD software) in the design, development and creation of a technological product or system.
	Assess the impact of products and systems.	8.2.12.D.4	Assess the impacts of emerging technologies on developing countries.
		8.2.12.D.5	Explain how material processing impacts the quality of engineered and fabricated products.
		8.2.12.D.6	Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions.

Content Area	Technolo!!V		
Standard	8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.		
Strand	E. Computational Thinking: Programming: *Computational thinking builds and enhances problem solving, allowing students to move beyond usinz knowledze to crealinJ! knowledge.*		
Grade	Content Statement	Indicator	Indicator
8			

Level bands	Students will be able to understand:		
K-2	**Computational thinking and computer programming as tools used in design and engineering.**	**8.2.2.E.1**	List and demonstrate the steps to an everyday task.
		8.2.2.E.2	Demonstrate an understanding of how a computer takes input through a series of written commands and then interprets and displays information as output.
		8.2.2.E.3	Create algorithms (a sets of instructions) using a pre-defined set of commands (e.g., to move a student or a character through a maze).
		8.2.2.E.4	Debug an algorithm (i.e., correct an error).
		8.2.2.E.5	Use appropriate terms in conversation (e.g., basic vocabulary words: input, output, the operating system, debug, and algorithm).
3-5	**Computational thinking and computer programming as tools used in design and engineering.**	**8.2.5.E.1**	Identify how computer programming impacts our everyday lives.
		8.2.5.E.2	Demonstrate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information.
		8.2.5.E.3	Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output.
		8.2.5.E.4	Use appropriate terms in conversation (e.g., algorithm, program, debug, loop, events, procedures, memory, storage, processing, software, coding, procedure, and data).
6-8	**Computational thinking and computer programming as tools used in design and engineering.**	**8.2.8.E.1**	Identify ways computers are used that have had an impact across the range of human activity and within different careers where they are used.
		8.2.8.E.2	Demonstrate an understanding of the relationship between hardware and software.
		8.2.8.E.3	Develop an algorithm to solve an assigned problem using a specified set of commands and use peer review to critique the solution.
		8.2.8.E.4	Use appropriate terms in conversation (e.g., programming, language, data, RAM, ROM,

			Boolean logic terms).
9-12	**Computational thinking and computer programming as tools used in design and engineering.**	**8.2.12.E.1**	Demonstrate an understanding of the problem-solving capacity of computers in our world.
		8.2.12.E.2	Analyze the relationships between internal and external computer components.
		8.2.12.E.3	Use a programming language to solve problems or accomplish a task (e.g., robotic functions, website designs, applications, and games).
		8.2.12.E.4	Use appropriate terms in conversation (e.g., troubleshooting, peripherals, diagnostic software, GUI, abstraction, variables, data types and conditional statements).

TECHNOLOGY TROUBLE TICKET

DATE:_____DATE REQUESTED BY:_____

NAME: _____

DEPARTMENT/RM #: _____

PLEASE CHECK THE BOXES THAT APPLY TO YOUR REQUEST

- 0 INTERNET CONNECTIVITY
  - o Port Number # _____
- 0 PORTABLE DEVICES
  - o IPADS
  - o NETBOOKS
  - o TABLETS
  - o LAPTOPS
- 0 COMPUTER HOOK-UP
- 0 PRINTER/COPIER
  - o Make/Model ——————————
- 0 REQUEST FOR NEW EMAIL ACCOUNT
- 0 TONER/INK
  - o Specify Toner/Ink/ Type of Printer ——————————
- 0 INTERACTIVE WHITEBOARDS/PROJECTORS
  - o Specify Type_____
- D OTHER (please use space provided for your request; provide as much detailed information as possible, i.e. error messages)

_____

_____

_____

_____

_____

_____

_____

Please return all COMPLETED forms to my mailbox in the main office.

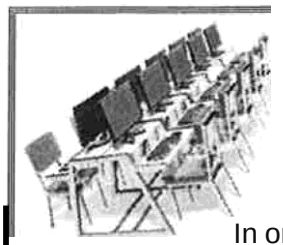
For office use only
Date received:_____Date completed:_____Initials:_____
__ Resolution
Notes: _____

_____

_____

_____

_____



COMPUTER LAB PROCEDURES

In order to keep our computer labs in fictional condition, it is imperative that guidelines are established. Therefore, all staff members are expected to adhere to the basic guidelines of operation while in the computer lab.

./ The labs are for instructional use. Students should always be working on an assignment, which you have planned and recorded in your plan book. Under no circumstance should recreational games be played while in the lab. There is no "Free Time" in the computer lab. Please be prepared with additional activities for those students who may complete planned lesson or HAVE NOT RETURNED their internet agreement.

./ Food is not allowed in the computer labs. No eating candies, sunflower seeds, etc., or gum chewing while in the lab. Students are not permitted to drink soft drinks, juices, etc in the lab.

./ Teachers are expected to circulate throughout the lab, providing assistance to students as needed. Please do not turn your back on your students for any extended period of time. We must monitor students' progress and performance in the lab. Students are to remain on task and at websites directly related to lesson. Close monitoring keeps students focused and on task.

./ Teachers should meet their students in their classroom and then accompany them to the lab. Please do not have your students meet you at the lab.

./ Leave the labs in an orderly fashion. This means that all chairs should be pushed in. Headphones should be placed on the side of the monitor. Mice and mice pads should be replaced appropriately. Monitor should be shut off. After your last class on Friday computers should be shut down properly. Remember that the lab must be maintained in orderly fashion for the use of you, your students, fellow colleagues, and their students.

./ I suggest that you stop your class 5 minutes before the end of the period in order to allow students time to clean up and prepare for dismissal. Dismissal from the lab should be in an orderly fashion and by the teacher.

./ Lastly, the entire student body uses the labs and we all must work together to keep them clean, orderly and in workable condition.

Managing Students with Computers

Computer Use Rules

General conduct

Students are expected to conduct themselves responsibly and with consideration for others at all times while in the computer lab or classroom. Any student encountering inappropriate material while online must immediately report the incident to the teacher. Students maintaining Web sites on school property must not engage in malicious behavior directed at any other student or staff member. Students may not purposely damage, mar or render any school computer property or peripherals inappropriately (eg: with stickers) or inoperable. Any computer problems must be immediately reported to the teacher.

Online plagiarism

Plagiarism is the theft of someone else's ideas or work. Students must properly identify their sources for all online and offline assignments. Copying and pasting from the Internet is an acceptable practice, as long as the source is properly identified. More information on copyright, plagiarism, and attribution may be found at

http://lcweb.loc.gov/copyright/
http://oma.od.nih. gov/ma/bps/bpkm/Tutorial __lnformati onEthics.htm.

School network abuses

Students may not attempt to interfere with the normal functioning of a computer system. No students, unless directed by the teacher or person of authority, may delete or empty their assigned computer's history list or temporary Internet files from the hard drive.

Games and other downloadable programs

No student may download games or other executable files.

Modified from:www.thirteen.org/edonline; ntti/

TECHNOLOGY LAB REQUEST FORM

Teacher/s:

Class/Grade:

Requested Lab including Day and Block:

Title of Activity:

- 8 Authentic Assessment Project
- 8 Study Island
- 8 Carnegie
- 8 Classwork Assignment
- 8 Research
- 8 Word Processing
- 8 Other: (Explain)

Example:

Teacher/s: Ms Irving/Ms Budhu

Class/Grade: Computer Applications/11th Grade

Requested Lab including Day and Time: Lab 217_0ctober 19 (B Day)_4th Block

Type of Activity:

Other: Students will be using Windows MovieMaker to create a digital story on the effects of Global Warming.

Website Submission Procedure

To develop a website that reflects our school,your input is needed. Below is a suggested list of items that can spotlight teachers and students on our school web page:

../ Announcements
../ Student Accomplishments
../ Photos of Events
../ Technology Lessons
../ Community Projects
./ Classroom Projects

To submit an entry for the website you need to provide the following:

../ Detailed description of the event, project or lesson
../ Photos must be clear
../ Parents' permission to post photos
../ Entries must be sent electronically to your Technology Coordinator

Website Evaluation Rubric

Name of Website: Type name of website here

URL: Type website address here

Website Design

Topic	3 Exceeds expectations	2 Meets expectations	1 Somewhat meets expectations	0 Does not meet expectations
Appearance of page(s) Type score here.	Enter descriptors here for page(s) that exceed expectations.	Enter descriptors here for page(s) that meet expectations.	Enter descriptors here for page(s) that meet some expectations.	Enter descriptors here for page(s) that do not meet expectations.
	Comments: Enter comments here.			
Ease of Navigation Type score here.	Enter descriptors here for page(s) that exceed expectations.	Enter descriptors here for page(s) that meet expectations.	Enter descriptors here for page(s) that meet some expectations.	Enter descriptors here for page(s) that do not meet expectations.
	Comments: Enter comments here.			
Ease of Use Type score here.	Enter descriptors here for page(s) that exceed expectations.	Enter descriptors here for page(s) that meet expectations.	Enter descriptors here for page(s) that meet some expectations.	Enter descriptors here for page(s) that do not meet expectations.
	Comments: Enter comments here.			

Match to Target Audience Type score here.	Enter descriptors here for page(s) that exceed expectations.	Enter descriptors here for page(s) that meet expectations.	Enter descriptors here for page(s) that meet some expectations.	Enter descriptors here for page(s) that do not meet expectations.
	Comments: Enter comments here.			
Website Content				
Topic	3 Exceeds expectations	2 Meets expectations	1 Somewhat meets expectations	0 Does not meet expectations
Expertise of Website Author Type score here.	Enter descriptors here for page(s) that exceed expectations.	Enter descriptors here for page(s) that meet expectations.	Enter descriptors here for page(s) that meet some expectations.	Enter descriptors here for page(s) that do not meet expectations.
	Comments: Enter comments here.			
Purpose of Website Type score here.	Enter descriptors here for page(s) that exceed expectations.	Enter descriptors here for page(s) that meet expectations.	Enter descriptors here for page(s) that meet some expectations.	Enter descriptors here for page(s) that do not meet expectations.
	Comments: Enter comments here.			
Accuracy of Information Presented Type score here.	Enter descriptors here for page(s) that exceed expectations.	Enter descriptors here for page(s) that meet expectations.	Enter descriptors here for page(s) that meet some expectations.	Enter descriptors here for page(s) that do not meet expectations.
	Comments: Enter comments here.			

Relationship to Curriculum Type score here.	Enter descriptors here for page(s) that exceed expectations.	Enter descriptor here for page(s) that meet expectations.	Enter descriptors here for page(s) that meet some expectations.	Enter descriptors here for page(s) that do not meet expectations.
	Comments: Enter comments here.			

Would you use this website with your students? O Yes O No

Why? Enter response here.

4 Helpful Solutions When the Computer Lab is Booked .....

One of the frustrations of using technology is that it is not always available when we need it. For example, most teachers are familiar with this scenario: Your lesson plans for next week require time in the computer lab, but when you go to sign up for the lab, you find that it is unavailable. What do you do?

This is an occasion that calls for an alternative lesson plan or, as the tech world describes it, a "workaround." When the lab is booked or down for maintenance and you can't get access to the technology you need, a workaround not only helps you make productive use of the time, but also teaches you students a valuable problem-solving skills and gives them an opportunity to brainstorm solutions.

Here are four helpful workarounds for this type of situation:

1. Your students need the lab to type an essay?

Have them spend the designated time sketching outlines to prepare for writing. Have them write out introductions and conclusions or even a rough draft before typing.

2. Your students need the lab to create a PowerPoint slide show?

Give them a storyboard on paper with blank slides they can fill out before going to the computer. Have them lay out all the elements they want to incorporate into their slide show: text, pictures, clipart, transitions, animation, etc.

3. Your students need the lab to do research on the Internet?

Now is a great time to teach a lesson on finding quality Internet sites. Review the steps for effective use of search engines and have students brainstorm a list of keywords that will help target their searches.

4. *Your students need the lab to explore the Web on a particular subject?*

Why not have them explore the library first? Once they have some basic information from good old-fashioned books, their Web research will be more focused."

Equipment Request Form



PLEASE GIVE A 24-48 HOUR NOTICE FOR ALL EQUIPMENT REQUEST

Staff Name: _____

Date: _____

Room _____

Equipment Requested: ——————————————————

_____

Date Needed: _____ Time Needed: _____

Date/Time to be returned: _____

Equipment may be picked up in lab 213 the morning of request. Notification will be provided if equipment is not available.

Equipment Provided

Piece of Equipment: _____

Serial/Service Tag# _____

Or BOE/State # ——————————————————

Piece of Equipment: _____

Serial/Service Tag# _____

Or BOE/State # ——————————————————

Modified from Mrs. P Bauernhuber, Technology Coordinator Cleveland Street School

Hardware Troubleshooting Checklist

Problem	Solution
My computer won't start. There is no green light power indicator on the front of the computer and no fan noise.	Check all power cords to make sure they are connected. Ifyou suspect a faulty cord, test it with another computer that you know is working. Also check outlets with the functioning computer, and make sure to turn on wall outlet or power bar switches. Ifyou are using a Macintosh, try the front power switch as well as the keyboard power switch.
My monitor won't come on.	Be sure the monitor is plugged in and the green indicator light is on. Try the on/off switch a few times. Ifit still does not come on, write up a track form.
My mouse pointer won't move.	Check that the mouse is securely plugged into the keyboard ADB port or into the back of the computer. Your mouse may also be dirty -- remove the mouse ball, clean it as well as the rollers inside the mouse.
My computer is on but nothing happens when I press the keys on my keyboard.	Make sure that the keyboard cable is securely plugged into the keyboard port.
My computer continually freezes.	You may have too many programs open at once or have too many browser windows open, which can overload the computer's memory.

Modified from www.thirteen.org/edonline/ntti/

Copyright and Fair Use Guidelines for Teachers

The following chart was designed to inform classroom teachers of their rights under the copyright law and copyright guidelines of the United States. Copyright and the notion of intellectual property was written into the Constitution of the United States to promote learning and the useful arts---and was designed to be supportive of the work of educators.

The purpose of copyright protection is repeatedly and mistakenly reported to be for the protection of authors and others intellectual property owners. In fact, copyright has been always been for the purpose of benefiting society as a whole and particularly the institutions of education. Leaming, or "science" in the language of the Enlightenment and the Constitution, was to be promoted by allowing authors and others rights for a limited time for their work. The first copyright act written into federal law was titled "The Education Act."

Teachers in the classroom make the decisions closest to the field of instruction and it is teachers that have been the greatest rights---rights that even their districts do not have. This Copyright Chart was designed to inform teachers of what they may do under the law.

Copyright Guidelines for Teachers

Teachers

PERMITTED

- single copy: chapter of book
- single copy: article from magazine or newspaper
- single copy: short story, short essay, short poem
- single copy: chart, graph, diagram, picture or non
- syndicated, non-copyrighted cartoon

NOT PERMITTED

- copying several chapters per book
- copying several articles per magazine
- copying consumables: workbooks, copyrighted
- exercise sheets, tests
- photocopying worn dittomasters

PERMITTED

- complete poem less than 250 words (not more than 2 pages)
- excerpt from long poem not to exceed 250 words
- article, story, or essay less than 2,500 words
- excerpt (from above) less than 1,000 words or 10% of total, whichever is less
- one chart, graph, diagram, picture, or non-syndicated, non-copyrighted cartoon Qfil book or periodical
- works combining prose, poetry, etc., less than 10% of whole
- IF.....
  - copying is for one course only
  - insufficient time to request permission
  - one work from a single author
  - less than 3 authors from collective work
  - 9 or less instances of multiple copying per term
  - copying not used to create or replace anthologies
  - same copying not repeated next term
  - students not charged beyond photocopying fees
- classroom quantities of current news articles if individual articles not copyrighted
- All multiple copying must be at the inspiration of the individual teacher and the decision to use the material so close to the date needed for instruction as to preclude securing copyright permission from the copyright holder

NOT PERMITTED

- using/making multiple copies of same material semester after semester
- creating "anthologies"
- copying workbooks and other works meant to be used once by one student
- copying shall not be directed by higher authority
- copying more than one or two excerpts from a single author during one class term
- copying from workbooks, tests, or other consumables. copying a blacklined master.

PERMITTED

- one illustration per book
- two pages per book as long as they don't comprise more than 10% of the book
- **Note:** Occasionally publishers of big books have given the District permission to copy that exceeds the normal fair use guidelines. Any letters granting additional permission will be kept on file by the library information specialist.

NOT PERMITTED

- copying "just" the text from a big book or picture book
- making an audio-tape of someone narrating a big book or picture book

Audiovisual Materials

PERMITTED

- creating slide sets from books, magazines, etc., as long as only one per source used
- making one overhead transparency of one page of one workbook
- converting a damaged filmstrip to a slide set, keeping same order minus damaged frames
- enlarging a map with an opaque projector for tracing but not duplicating color scheme, symbols, etc.
- copying non-dramatic literary, audiovisual works for use by blind or deaf individuals

NOT PERMITTED

- copying audio tapes or video tapes for archival or backup purposes
- reproducing musical works or converting from one form to another (record to cassette)
- copying any audiovisual work in its entirety (except off-air taping)
- converting from one medium format to another
- recording the text of a book or textbook onto an audiocassette

Music

PERMITTED

- emergency copies for performance provided copies are later purchased
- for study or teaching, single or multiple copies of excerpts
- IF.....
  - excerpts do not constitute a performable unit such as a movement or aria
- editing purchased copies for simplification
- **IF.....**
  - character of work is not changed
  - lyrics are not changed
- single copy of performances by students made for evaluation or rehearsal purposes
- copy of recording for purposes of aural testing
- portion of commercial music played as background

NOT PERMITTED

- copying for performances
- copying to create anthologies
- copying to avoid purchasing
- copying but excluding copyright notice
- performing a work without a license or paying royalty fees

in student media production

PERMITTED

- may record program OFF-AIR
- **IF.....**
  - o program is used for instructional purposes, or face-to-face teaching, not for entertainment or filler
  - o program is requested by a teacher
  - o program is shown once and repeated once per class by individual teacher during first 1.Q consecutive school days after broadcast
  - o program is not retained beyond 45 calendar days
  - o program is recorded in its entirety (need not be used in its entirety)
  - o after first 10 consecutive school days, program is used only for evaluation by teacher

NOT PERMITTED

- videotaping **in** anticipation of requests
- retaining a program longer than 45 days
- showing a program after ten days
- showing for motivation, filler, or entertainment purposes
- taping a program at home, using in the classroom, and subsequently retaining in personal collection

Video (OFF-AIR Taping at Home)

PERMITTED

- may tape program at home and bring to school to use but all educational guidelines must be followed
- may show "home" tape if above criteria are followed and if tape legally made

NOT PERMITTED

- individual who taped program may not retain it

Video (Cable)

PERMITTED

- may tape programs being simultaneously broadcast (see OFF-AIR educational/ instructional guidelines)
- may show videos or motion pictures via cable within a building as long as programs are used in face-to-face teaching and are of an instructional nature

NOT PERMITTED

- may not tape programs not being broadcast simultaneously (CNN, Discovery, Disney, HBO, etc.) unless prior approval or license obtained from cable network
- may not show programs of a musical, dramatic, or entertainment nature
- may not copy cable or satellite programs without permission. Note: Educators may use cable magazines, like Cable in the Classroom for varying copying/retention rights of individual programs.

Video (purchased or rented)

PERMITTED	NOT PERMITTED
• showing purchased or rented videotape for curriculum-supported, face-to-face teaching activities	• showing purchased or rented videotape for entertainment, rewards, rainy days, filler, or non-instructional purposes. • **Note:** Performance rights may be acquired at time of purchase; then it's legal to show such videos for non-instructional events.

[illegible]

PERMITTED	NOT PERMITTED
• copying from a satellite transmission will depend on the contractual agreement with the satellite company.	• copies of motion pictures, other AV works, choreographic works and pantomimes • copies of broadcasts that are of a "general cultural nature" or intended for transmission as part of an information storage and retrieval system

Software

PERMITTED	NOT PERMITTED
• copying into RAM if copying is necessary to use the program • one copy for archival purposes • probably may make a 3.5" disk from a 5 1/4" disk if the 5 1/4" disk is considered the archival copy • back up copies of hard drives as long as they are not used to run another drive • library lending of public domain software	• circulation of archival copy • "networking" software without license or permission • loading a single copy of a software program onto several computers for simultaneous use • making copies of copyrighted software for student use

Databases

PERMITTED	NOT PERMITTED
• may download searches	• downloaded searches should not be retained • downloaded material may not be used to create a derivative work

CD-ROM

PERMITTED

- printing out pages of reference or other works for study or teaching

NOT PERMITTED

- printing out large section of work

PERMITTED

- school chorus performance open to the public

NOT PERMITTED

- school drama club performing copyrighted play broadcast over cable to classes
- recording of choral or instrumental concerts and then giving or selling recording to parents

PERMITTED

- teacher or student-developed multimedia program of copyrighted programs for use in classroom only
- **Note:** Students may keep their work indefinitely; teachers may keep their work for only two years.
- IF: the following limitations are observed:
  - Motion media
    - use of up to 10% or 3 min., whichever is less, of an individual program
  - Text
    - up to 10% or 1000 words, whichever is less; short poems less than 250 words may be used in their entirety;
  - Music
    - Up to 10% but no more than 30 sec. From a single work (or combined from separate extracts of a work);
  - Illustrations, cartoons, photographs
    - no more than 5 images from a single artist or photographer, no more than 10% or 15 images from a single collective work;
  - Numerical data sets
    - up to 10% or 2,550 fields or cells whichever is less

NOT PERMITTED

- teacher or student-developed multimedia program of copyrighted works for use in displays, festivals, parent meetings or other public events

PERMITTED

- downloading public domain software

NOT PERMITTED

- uploading copyrighted software to Internet for downloading
- collecting materials *off* the Internet and compiling into a new work
- forwarding material *off* the Internet to friends, co-workers

Digital

PERMITTED

NOT PERMITTED

- digitizing a copyrighted slide collection
- scanning copyrighted materials (magazine photograph, cartoon illustration, etc.) for school newspaper

Graphics

Graphics

PERMITTED

- one graphic per book or periodical;
- multiple copies of a single graphic
- **IF...**
  - copying is at the instance/inspiration of teacher; copy is for only one course in the school;
  - here are not more than nine occurrences of multiple copying for that course; and not more than one graphic is copied per book or periodical.

NOT PERMITTED

- adaptation of a popular cartoon character for the school mascot;
- copying an image from a coloring book for a worksheet;
- making stuffed animals of popular picture book characters;
- scanning a cartoon into school newsletter;

CROSSWALK

Future Ready Librarians™ Framework and ISTE Standards for Educators

September 2018

ISTE

Follett

FUTURE READY LIBRARIANS

A PROJECT OF THE ALLIANCE FOR EXCELLENT EDUCATION

CROSSWALK

Future Ready Librarians™ Framework and ISTE Standards for Educators

Overview

School librarians and library media specialists play a critical role, one that has only grown more important as information has dispersed and proliferated online. Librarians often serve as technology leads within their school building and they provide invaluable learning on how to find relevant resources, evaluate the credibility and usefulness of information, and be thoughtful digital citizens. Both ISTE and Future Ready Librarians™ recognize the value of library professionals. Future Ready Schools' included librarians as part of their expansive FRS Framework, expanding the signature "gears" to include their work. When ISTE refreshed their teacher standards in 2017 they repositioned them as the ISTE Standards for Educators to support those who educate children both in and out of the traditional classroom, with librarians and library media specialists being top-of-mind in that shift.

For example, the ISTE Standards for Educators encourage leadership skills that contribute to digital teaching and learning in schools. Librarians and library media specialists are already leaders in their systems. Both the Future Ready Librarians™ Framework and ISTE Standards for Educators acknowledge the need for collaborative leadership alongside principals and district administrators. With the goal of preparing future ready digital-age learners, school librarians can use this crosswalk to identify new ways to lead, teach, and support students and teachers.

HOW TO USE THESE CROSSWALKS

In the crosswalks below, you will find the interconnections between the Future Ready Librarians" Framework and the ISTE Standards for Educators. These two frameworks support and complement each other, each deepening the other because they share the same goal: dynamic, equitable digital age learning for all students. Because the Future Ready framework takes a high level view, while the Educator Standards are more granular, the specific, related portions of the Future Ready indicators are highlighted to make the interconnects clearer. Use these crosswalks to guide and deepen the work you do as a librarians or library media specialist or to rethink, redesign and grow the role in your school or district. This document is also a valuable tool for educational leaders who are looking for ways to help support their librarians and to understand the role that the Future Ready Librarians TM and the ISTE Standards for Educators play in their districts.

These bi-directional crosswalks allow the reader to approach this body of work from their personal or professional knowledge base. In other words, to start exploring correlations from what they know best and expand learning.

ISTE Standards for Educators to Future Ready Librarians TM Framework Crosswalk

ISTE STANDARDS FOR EDUCATORS	FUTURE READY LIBRARIANS™ FRAMEWORK
Learner Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning. Educators: • Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness. • Pursue professional interests by creating and actively participating in local and global learning networks. • Stay current with research that supports improved student learning outcomes, including findings from the learning sciences.	**COLLABORATIVE LEADERSHIP - Leads Beyond the Library** Participates in setting the district's vision and strategic plan for digital learning and fosters **a culture of collaboration and innovation to empower teachers and learners.** **PERSONALIZED PROFESSIONAL LEARNING - Facilitates Professional Learning** Leads **professional learning to cultivate broader understanding of the skills that comprise success in a digital age** (e.g., critical thinking, information literacy, digital citizenship, technology competencies, etc.)

ISTE STANDARDS FOR EDUCATORS	FUTURE READY LIBRARIANS™ FRAMEWORK
Leader Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning Educators: • Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders. • Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students. • Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning	**TECHNOLOGY AND INFRASTRUCTURE - Ensures Equitable Digital Access** Provides and **advocates for equitable access to connectivity, digital devices, information, resources, programming, and services** in support of the district's strategic vision. **BUDGET AND RESOURCES - Invests Strategically in Digital Resources** **Leverages an understanding of school and community needs to identify and invest in digital resources to support student learning** **COLLABORATIVE LEADERSHIP - Leads Beyond the Library** **Participates in setting the district's vision and strategic plan for digital learning** and fosters a culture of collaboration and innovation to empower teachers and learners.
Citizen Educators inspire students to positively contribute to and responsibly participate in the digital world. Educators: • Create experiences for learners to make positive, socially responsible contributions and exhibit empathetic behavior online that build relationships and community. • Establish a learning culture that promotes curiosity and critical examination of online resources and fosters digital literacy and media fluency. • Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property. • Model and promote management of personal data and digital identity and protect student data privacy	**CURRICULUM, INSTRUCTION, AND ASSESSMENT - Empowers Students as Creators** Encourages and facilitates students to become increasingly self-directed as they **create digital products of their learning that engage them in critical thinking, collaboration and authentic, real-world problem solving.** **PERSONALIZED PROFESSIONAL LEARNING - Facilitates Professional Learning** Leads professional learning to cultivate broader understanding of the skills that comprise **success in a digital age (e.g., critical thinking, information literacy, digital citizenship, technology competencies, etc.)** **DATA AND PRIVACY - Advocates for Student Privacy** **Teaches and promotes student data privacy** through their instruction and role as educational leaders.

ISTE STANDARDS FOR EDUCATORS	FUTURE READY LIBRARIANS FRAMEWORK
Collaborator Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Educators: • Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology. • Collaborate and co-learn with students to discover and use new digital resources and diagnose and troubleshoot technology issues. • Use collaborative tools to expand students' authentic, real-world learning experiences by engaging virtually with experts, teams and students, locally and globally. • Demonstrate cultural competency when communicating with students, parents and colleagues and interact with them as co-collaborators in student learning.	**COLLABORATIVE LEADERSHIP - LEADS BEYOND THE LIBRARY** Participates in setting the district's vision and strategic plan for digital learning and **fosters a culture of collaboration and innovation** to empower teachers and learners. **CURRICULUM, INSTRUCTION, AND ASSESSMENT - Builds Instructional Partnerships** **Partners with educators to design and implement evidence-based curricula and assessments that integrate** elements of deeper learning, critical thinking, information literacy, digital citizenship, creativity, innovation and **the active use of technology.** **CURRICULUM, INSTRUCTION, AND ASSESSMENT - Curates Digital Resources and Tools** **Leads in the selection, integration, organization, and sharing of digital resources and tools to support transformational teaching and learning and develop the digital curation skills of others.** **COMMUNITY PARTNERSHIPS - Cultivates Community Partnerships** **Cultivates partnerships within the school and local community (families and caregivers, non-profit organizations, government agencies, public and higher education libraries, businesses, etc.) to promote engagement and a lifelong learning process.**
Designer Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability. Educators: • Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. • Design authentic learning activities that align with content area standards and use digital tools and resources to maximize active, deep learning. • Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning.	**USE OF SPACE AND TIME - Designs Collaborative Spaces** Provides flexible spaces that promote inquiry, creativity, collaboration and community. **CURRICULUM, INSTRUCTION, AND ASSESSMENT - Builds Instructional Partnerships** Partners with educators to **design** and implement **evidence-based curricula and assessments that integrate elements of deeper learning, critical thinking, information literacy, digital citizenship, creativity, innovation and the active use of technology.** **CURRICULUM, INSTRUCTION, AND ASSESSMENT - Empowers Students as Creators** **Encourages and facilitates students to become increasingly self-directed** as they create digital products of their learning that engage them in critical thinking, collaboration and authentic, real-world problem solving.

ISTE STANDARDS FOR EDUCATORS	FUTURE READY LIBRARIANS FRAMEWORK
Facilitator Educators facilitate learning with technology to support student achievement of the ISTE Standards for Students. Educators: • Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings. • Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field. • Create learning opportunities that challenge students to use a design process and computational thinking to innovate and solve problems. • Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.	**CURRICULUM, INSTRUCTION, AND ASSESSMENT - Empowers Students as Creators** Encourages and **facilitates students to become increasingly self-directed as they create digital products of their learning that engage them in critical thinking, collaboration and authentic, real-world problem solving.** **USE OF SPACE AND TIME - Designs Collaborative Spaces** **Provides flexible spaces that promote inquiry, creativity, collaboration and community.** **CURRICULUM, INSTRUCTION, AND ASSESSMENT - Curates Digital Resources and Tools** Leads in the selection, **integration,** organization, and sharing **of digital resources and tools to support transformational teaching and learning and develop the digital curation skills of others.**
Analyst Educators understand and use data to drive their instruction and support students in achieving their learning goals. Educators: • Provide alternative ways for students to demonstrate competency and reflect on their learning using technology • Use technology to design and implement a variety of formative and summative assessments that accommodate learner needs, provide timely feedback to students and inform instruction • Use assessment data to guide progress and communicate with students, parents and education stakeholders to build student self-direction.	**CURRICULUM, INSTRUCTION, AND ASSESSMENT - Builds Instructional Partnerships** Partners with educators to **design and implement evidence-based curricula and assessments** that integrate elements of deeper learning, critical thinking, information literacy, digital citizenship, creativity, innovation and the active use of technology. **CURRICULUM, INSTRUCTION, AND ASSESSMENT - Empowers Students as Creators** **Encourages and facilitates students to become increasingly self-directed as they create digital products of their learning** that engage them in critical thinking, collaboration and authentic, real-world problem solving. **CURRICULUM, INSTRUCTION, AND ASSESSMENT - Curates Digital Resources and Tools** Leads in the **selection, integration, organization, and sharing of digital resources and tools to support transformational teaching and learning** and develop the digital curation skills of others.

Future Ready Librarians (™) Framework to ISTE Standards for Educators Crosswalk

FUTURE READY LIBRARIANS™ FRAMEWORK	ISTE STANDARDS FOR EDUCATORS
COLLABORATIVE LEADERSHIP ·Leads Beyond the Library Participates in setting the district's vision and strategic plan for digital learning and fosters a culture of collaboration and innovation to empower teachers and learners.	**Learner** Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning. Educators: • Pursue professional interests by creating and actively participating in local and global learning networks. • Stay current with research that supports improved student learning outcomes, including findings from the learning sciences. **Leader** Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. Educators: • Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders. **Collaborator** Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Educators: • Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.
USE OF SPACE AND TIME ·Designs Collaborative Spaces Provides flexible spaces that promote inquiry, creativity, collaboration and community.	**Designer** Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability. Educators: • Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. • Explore and apply instructional design principles to create innovative digital learning environments that engage and support learning. **Facilitator** Educators facilitate learning with technology to support studnt achievement of the ISTE Standards for Students. Educators: • Manage the use of technology and student learning strategies in digital platforms, virtual environments, hands-on makerspaces or in the field. • Model and nurture creativity and creative expression to communicate ideas, knowledge or connections.

FUTURE READY LIBRARIANS™ FRAMEWORK	ISTE STANDARDS FOR EDUCATORS
CURRICULUM, INSTRUCTION, AND ASSESSMENT **- Curates Digital Resources and Tools** Leads in the **selection, integration, organization, and sharing of digital resources and tools to support transformational teaching and learning** and develop the digital curation skills of others. **·Builds Instructional Partnerships** Partners with educators to **design and implement evidence-based curricula and assessments** that integrate elements of deeper learning, critical thinking, information literacy, digital citizenship, creativity, innovation and the active use of technology. **- Empowers Students as Creators** **Encourages and facilitates students to become increasingly self-directed as they create digital products of their learning** that engage them in critical thinking, collaboration and authentic, real-world problem solving	**Leader** Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. Educators: • **Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning.** **Collaborator** Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Educators: • Dedicate planning time to **collaborate with colleagues to create authentic learning experiences that leverage technology.** **Designer** Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability. Educators: • Use technology to create, adapt and personalize learning experiences that **foster independent learning** and accommodate learner differences and needs. • **Design authentic learning activities** that align with content area standards and use digital tools and resources to maximize active, deep learning. **Facilitator** Educators facilitate learning with technology to support student achievement of the ISTE Standards for Students. Educators: • **Foster a culture where students take ownership of their learning goals** and outcomes in both independent and group settings. • Create learning opportunities that **challenge students to use a design process and computational thinking to innovate and solve problems.**

FUTURE READY LIBRARIANS™ FRAMEWORK	ISTE STANDARDS FOR EDUCATORS
PERSONALIZED PROFESSIONAL LEARNING - Facilitates Professional Learning Leads professional learning to cultivate broader understanding of the skills that comprise success in a digital age (e.g., critical thinking, information literacy, digital citizenship, technology competencies, etc.)	**Learner** Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning. Educators: •. Set professional learning goals to explore and apply pedagogical approaches made possible by technology and reflect on their effectiveness. • Pursue professional interests by creating and actively participating in local and global learning networks. • Stay current with research that supports improved student learning outcomes, including findings from the learning sciences. **Leader** Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. Educators: • Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders. • Model for colleagues the identification, exploration, evaluation, curation and adoption of new digital resources and tools for learning. **Collaborator** Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Educators: • Dedicate planning time to collaborate with colleagues to create authentic learning experiences that leverage technology.

FUTURE READY LIBRARIANS™ FRAMEWORK	ISTE STANDARDS FOR EDUCATORS
ROBUST INFRASTRUCTURE - Ensures Equitable Digital Access Provides and advocates for equitable access to collection tools using digital resources, programming, and services in support of the school district's strategic vision.	**Leader** Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. Educators: • Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders. • Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.
BUDGET AND RESOURCES - Invests Strategically in Digital Resources Leverages an understanding of school and community needs to identify and invest in digital resources such as books and ebooks to support student learning.	**Leader** Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. Educators: • Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders. • Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students.
COMMUNITY PARTNERSHIPS - Cultivates Community Partnerships Leverages an understanding of school and community needs to identify and invest in digital resources such as books and ebooks to support student learning.	**Leader** Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning. Educators: • Shape, advance and accelerate a shared vision for empowered learning with technology by engaging with education stakeholders. • Advocate for equitable access to educational technology, digital content and learning opportunities to meet the diverse needs of all students. **Collaborator** Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems. Educators: • Demonstrate cultural competency when communicating with students, parents and colleagues and interact with them as co-collaborators in student learning.
DATA PRIVACY - Advocates for Student Privacy Cultivates partnerships within the school and local community (including families and caregivers, nonprofit organizations, government agencies, public and higher education libraries, businesses) to promote engagement and a community of readers.	**Citizen** Educators inspire students to positively contribute to and responsibly participate in the digital world. Educators: • Mentor students in safe, legal and ethical practices with digital tools and the protection of intellectual rights and property. • Model and promote management of personal data and digital identity and protect student data privacy.

FUTURE READY LIBRARIANS™ FRAMEWORK	ISTE STANDARDS FOR EDUCATORS
LITERACY - Inspires and supports the reading lives of both students and teachers Creates inclusive collections that acknowledge and celebrate diverse experiences and provide instructional opportunities to empower learners as effective users and creators of information and ideas.	**Citizen** Educators inspire students to positively contribute to and responsibly participate in the digital world. Educators: • Establish a learning culture that promotes curiosity and critical examination of online resources and fosters digital literacy and media fluency. **Designer** Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability. Educators: • Use technology to create, adapt and personalize learning experiences that foster independent learning and accommodate learner differences and needs. **Facilitator** Educators facilitate learning with technology to support student achievement of the ISTE Standards for Students. Educators: • Foster a culture where students take ownership of their learning goals and outcomes in both independent and group settings. **Analyst** Educators understand and use data to drive their instruction and support students in achieving their learning goals. Educators: • Provide alternative ways for students to demonstrate competency and reflect on their learning using technology.

For reference:
www.iste.org/standards/for-educators
https://futureready.arg/program-overview/Iibrarians/

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The International Society for Technology in Education is the premier membership association for educators and education leaders committed to empowering connected learners in a connected world. Home to the ISTE Conference & Expo and the widely adopted ISTE Standards for learning, teaching and leading in the digital age, the association represents more than 100,000 professionals worldwide. We support our members with professional development, networking opportunities, advocacy and edtech resources.

Future Ready Schools® is a project of the Alliance for Excellent Education {All4Ed), a Washington, DC -based national policy, practice, and advocacy organization dedicated to ensuring that all students, particularly those underperforming and those traditionally underserved, graduate from high school ready for success in college, work, and citizenship. www.futureready.org

IS It:

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