

Technology Curriculum Guidelines

*The Diocese of Spokane
Spokane, Washington*



2015

PURPOSE

The following Technology Curriculum has been developed to assist teachers and administrators in the Diocese of Spokane. This document shall be localized by each school, including the integration of our Catholic Identity. The standards are aligned with International Society for Technology in Education (ISTE) Standards and Washington State Learning Standards. Some standards have two types of examples provided entitled Minimal and Rich Technology Environments. The examples for the minimal technology environments are for all schools while those examples entitled Rich Technology environment are for those schools who are aligned with the 21st Century Learning Environment.

MISSION STATEMENT

The Catholic Diocese of Spokane will guide students to be technologically proficient, responsible servant leaders who ethically use technology to reach their potential and benefit humanity. Our mission is to form technologically literate lifelong learners who continue to refine their skills while maintaining the moral and ethical values of our Catholic faith.

Diocese of Spokane believes:

- The student who recognizes the connection between faith and technology will be better able to put technology to the service of men and women and to the service of God.
- Technology will continue to develop and provide new expanded opportunities to enhance learning.
- The implementation of the standards is intended to be flexible and dynamic with continual updating due to changing developments in technology.
- Schools must be prepared to stay current with advances to replace and upgrade technology on an ongoing basis.
- School technology curriculum must be integrated into all curricular areas.
- Support and staff development opportunities are essential for technology utilization for teaching and learning.
- The teachers are the key to full utilization of technology in the educational process. Teachers design experiences and delivery of curriculum to meet student needs. Teachers use technology for expanding learning opportunities for students.

PREPARED BY: Derek Duchesne, Sara Raske, Nick Senger, Katie Rieckers

International Society for Technology in Education (ISTE standards)

1. Creativity and innovation

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

- Apply existing knowledge to generate new ideas, products, or processes
- Create original works as a means of personal or group expression
- Use models and simulations to explore complex systems and issues
- Identify trends and forecast possibility

2. Communication and collaboration

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

- Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media
- Communicate information and ideas effectively to multiple audiences using a variety of media and formats
- Develop cultural understanding and global awareness by engaging with learners of other cultures
- Contribute to project teams to produce original works or solve problems

3. Research and information fluency

Students apply digital tools to gather, evaluate, and use information.

- Plan strategies to guide inquiry
- Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- Evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- Process data and report results

4. Critical thinking, problem solving, and decision making

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

- 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

5. Digital citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

- Advocate and practice safe, legal, and responsible use of information and technology
- Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
- Demonstrate personal responsibility for lifelong learning
- Exhibit leadership for digital citizenship

6. Technology operations and concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations.

- Understand and use technology systems
- Select and use applications effectively and productively
- Troubleshoot systems and applications
- Transfer current knowledge to learning of new technologies

Grades Kindergarten ~ Second

ISTE STANDARD 1: Creativity and Innovation

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

- Apply existing knowledge to generate new ideas, products, or processes
- Create original works as a means of personal or group expression
- Use models and simulations to explore complex systems and issues
- Identify trends and forecast possibility

K	1	2
Examples for Minimal Technology Environment		
<ul style="list-style-type: none"> ● Create a picture in a digital drawing program 	<ul style="list-style-type: none"> ● Use digital graphic organizers to brainstorm ideas for a project 	<ul style="list-style-type: none"> ● Create a class graph using data from student interest ● Use interactive resources to practice skills, explore new concepts and describe patterns ● Explore and identify patterns as a class using images, graphic organizers, templates
Examples for Technology Rich Environment		
<ul style="list-style-type: none"> ● Use drawing tools to illustrate pages in a digital ABC book ● Sort and classify various items using a document camera/iPad or an interactive whiteboard as a class 	<ul style="list-style-type: none"> ● Explore and identify patterns as a class using images, graphic organizers, templates ● Illustrate and communicate original ideas and stories on various topics using digital tools ● Digitally record ideas generated from class discussion 	<ul style="list-style-type: none"> ● Create a digital representation of a topic of study ● Use digital simulations to explore and depict patterns ● Create surveys, collect data and use graphing templates to share results

Other examples from school's localization:

ISTE STANDARD 2: Communication and Collaboration

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

- Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media
- Communicate information and ideas effectively to multiple audiences using a variety of media and formats
- Develop cultural understanding and global awareness by engaging with learners of other cultures
- Contribute to project teams to produce original works or solve problems

K	1	2
Examples for Minimal Technology Environment		
<ul style="list-style-type: none"> ● Share and discuss student work using a digital device ● Explore many cultures through digital images and stories from around the world as a class 	<ul style="list-style-type: none"> ● Choose digital pictures with a partner to incorporate into a classroom project ● Explore many cultures through digital images and stories from around the world as a class 	<ul style="list-style-type: none"> ● Share information from an author’s website as part of a book report ● Explore cultures through digital images and stories from around the world
Examples for Technology Rich Environment		
<ul style="list-style-type: none"> ● Draw or record a story with a partner using a software program or app 	<ul style="list-style-type: none"> ● Collaborate with a partner to select an example of work to publish ● Use a digital graphic organizer to compare/contrast stories from various cultures 	<ul style="list-style-type: none"> ● Create a multimedia project to share learning ● Participate in an information exchange with people outside of our region

Other examples from school’s localization:

ISTE STANDARD 3: Research and information fluency

Students apply digital tools to gather, evaluate, and use information.

- Plan strategies to guide inquiry
- Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- Evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- Process data and report results

K	1	2
Examples for Minimal Technology Environment		
<ul style="list-style-type: none"> • Visit a website about a subject and generate questions with a partner or small group with teacher assistance 	<ul style="list-style-type: none"> • Visit a website about a subject and generate questions with a partner or small group • Gather information about a subject as a class using websites, videos, and other digital media 	<ul style="list-style-type: none"> • Visit a website about a subject and generate questions with a partner or small group • Gather information about a subject as a class using websites, videos, and other digital media
Examples for Technology Rich Environment		
<ul style="list-style-type: none"> • Record questions for a digital KWL chart as a class • Use a table to organize information as a class 	<ul style="list-style-type: none"> • Record questions for a digital KWL chart with a partner or group • Use a digital template as a class to organize information 	<ul style="list-style-type: none"> • Locate information using teacher-selected websites to answer a question • Use a digital template with a partner to organize information

Other examples from school’s localization:

ISTE STANDARD 4: Critical thinking, problem solving, and decision making

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

- 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

K	1	2
Examples for Minimal Technology Environment		
<ul style="list-style-type: none"> ● Use digital templates to explore and depict patterns as a class 	<ul style="list-style-type: none"> ● Create surveys to collect data and use a spreadsheet to share results as a class ● Share different ways to solve problems using a document camera or computer with LCD projector 	<ul style="list-style-type: none"> ● Create surveys to collect data and use a spreadsheet to share results as a class ● Share different ways to solve problems using a document camera or computer with LCD projector
Examples for Technology Rich Environment		
<ul style="list-style-type: none"> ● Share information and pictures of student projects on a teacher web page 	<ul style="list-style-type: none"> ● Share information and pictures of student projects on a teacher web page 	<ul style="list-style-type: none"> ● Analyze collected data to present a solution with a partner or small group ● Share research findings using presentation software

Other examples from school's localization:

ISTE STANDARD 5: Digital citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

- Advocate and practice safe, legal, and responsible use of information and technology
- Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
- Demonstrate personal responsibility for lifelong learning
- Exhibit leadership for digital citizenship

K	1	2
Examples for Minimal and Rich Technology Environment		
<ul style="list-style-type: none"> • Practice safe, responsible sharing of information online • Keep passwords private • Participate in classroom safety discussions that reference online safety • Practice ethical and respectful behavior • Use classroom technologies carefully and correctly 	<ul style="list-style-type: none"> • Practice safe, responsible sharing of information online • Keep passwords private • Recognize potential online dangers • Discuss danger in using personal name, address, phone number or picture online • Practice ethical and respectful behavior • Use classroom technologies carefully and correctly 	<ul style="list-style-type: none"> • Practice safe, responsible sharing of information online • Keep passwords private • Recognize potential online dangers • Discuss danger in using personal name, address, phone number or picture online • Practice ethical and respectful behavior • Use classroom technologies carefully and correctly

Other examples from school's localization:

ISTE STANDARD 6: Technology operations and concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations.

- Understand and use technology systems
- Select and use applications effectively and productively
- Troubleshoot systems and applications
- Transfer current knowledge to learning of new technologies

K	1	2
Examples for Minimal and Rich Technology Environment		
<ul style="list-style-type: none"> • Use correct vocabulary to describe to describe digital technologies • Use left and right hand side of keyboard, thumb on spacebar • Demonstrate proper use and care of digital equipment 	<ul style="list-style-type: none"> • Use correct vocabulary to describe to describe digital technologies • Use left and right hand side of keyboard, thumb on spacebar and little finger on the enter key • Demonstrate correct posture while using the keyboard • Open and save files • Demonstrate proper use and care of digital equipment • Communicate learning with beginning level features of a word processing or publishing program 	<ul style="list-style-type: none"> • Use correct vocabulary to describe digital technologies • Meet keyboarding proficiency standards for grade level • Demonstrate correct home row on the keyboard • Use a keyboarding program • Demonstrate correct posture while using the keyboard • Open, save, and share files • Demonstrate proper use and care of digital equipment • Identify and solve common problems related to digital equipment • Communicate learning with beginning level features of a word processing or publishing program

Other examples from school's localization:

Grades Third ~ Fifth

ISTE STANDARD 1: Creativity and Innovation

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

- Apply existing knowledge to generate new ideas, products, or processes
- Create original works as a means of personal or group expression
- Use models and simulations to explore complex systems and issues
- Identify trends and forecast possibility

3	4	5
Examples for Minimal Technology Environment		
<ul style="list-style-type: none"> ● Create a digital collage ● Create a presentation ● Collect and graph data to predict outcomes and interpret patterns/trends ● Create a class graph using spreadsheet software 	<ul style="list-style-type: none"> ● Use presentation software to identify and show the unique geographic regions of the United States ● Collect and graph data to predict outcomes and interpret patterns/trends ● Identify trends by using an online coin flipping site ● Use a spreadsheet or table to display and analyze data 	<ul style="list-style-type: none"> ● Use presentation software to depict the importance and impact of colonization ● Collect and graph data to predict outcomes and interpret pattern/trends ● Use online simulations and activities to visualize fractions
Examples for Technology Rich Environment		
<ul style="list-style-type: none"> ● Create a diagram using digital tools ● Select exemplary work to store in an electronic portfolio 	<ul style="list-style-type: none"> ● Create an electronic portfolio ● Use a table to organize and compare information ● Use online models and simulations to conceptualize area and perimeter 	<ul style="list-style-type: none"> ● Present electronic portfolio of exemplary work ● Use a table to analyze, organize and compare information ● Label an image to show parts of a life cycle using digital tools ● Use online resources to demonstrate transfer of energy between systems ● Investigate earthquake locations around the world using online mapping tools

Other examples from school's localization:

ISTE STANDARD 2: Communication and Collaboration

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

- Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media
- Communicate information and ideas effectively to multiple audiences using a variety of media and formats
- Develop cultural understanding and global awareness by engaging with learners of other cultures
- Contribute to project teams to produce original works or solve problems

3	4	5
Examples for Minimal Technology Environment		
<ul style="list-style-type: none"> • Participate in online projects • Connect with pen pal using digital tools (whole class video chat with another classroom) • Learn about cultures through digital images and stories from around the world and share relevant information 	<ul style="list-style-type: none"> • Participate in online projects • Connect with pen pal using digital tools • Learn about cultures through digital images and stories from around the world and share relevant information 	<ul style="list-style-type: none"> • Participate in online projects • Participate in collaborative projects with students from outside classroom • Learn about cultures through digital images and stories from around the world and share relevant information
Examples for Technology Rich Environment		
<ul style="list-style-type: none"> • Take notes and collaborate using a shared document • Create a multimedia project to share learning about a particular topic 	<ul style="list-style-type: none"> • Share and comment, using digital tools, on student projects • Solve a mathematics problem and post online for feedback or comments • Communicate effectively using digital tools (Edmodo, Padlet, blog, email) 	<ul style="list-style-type: none"> • Share book reviews and make book recommendations on a classroom wiki, blog, or web page • Connect to other students to reflect on and share writing • Debate issues using shared documents

Other examples from school's localization:

ISTE STANDARD 3: Research and information fluency

Students apply digital tools to gather, evaluate, and use information.

- Plan strategies to guide inquiry
- Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- Evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- Process data and report results

3	4	5
Examples for Minimal Technology Environment		
<ul style="list-style-type: none"> ● Develop research questions using a teacher created digital template ● Use teacher selected websites to find out more about a problem or topic for research ● Use digital tools to help plan projects ● Choose relevant websites from a collection of online resources selected by the teacher ● Identify which online resources provided answers to questions 	<ul style="list-style-type: none"> ● Develop research questions using a teacher created digital template ● Use teacher selected websites to find out more about a problem or topic for research ● Use digital tools to help plan projects ● Question information to determine fact vs. fiction on a web page ● Record sources used in research 	<ul style="list-style-type: none"> ● Develop research questions using a digital template ● Use websites to find out more about a problem or topic for research ● Use digital tools to help plan projects ● Locate useful information to copy and paste into an organized list ● Record sources used in research so that it conforms to the guidelines in a style manual ● Work with others to complete a task using online resources selected by the teacher
Examples for Technology Rich Environment		
	<ul style="list-style-type: none"> ● Select and bookmark websites that will answer questions or find information ● Organize information digitally 	<ul style="list-style-type: none"> ● Select and bookmark websites that will answer questions or find information ● Organize information digitally

Other examples from school's localization:

ISTE STANDARD 4: Critical thinking, problem solving, and decision making

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

- 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

3	4	5
Examples for Minimal Technology Environment		
<ul style="list-style-type: none"> ● Share solutions using digital tools ● Begin to recognize potential bias in websites 	<ul style="list-style-type: none"> ● Share solutions using digital tools ● Use digital simulations to find a solution or make decisions (e.g. Minecraft, SIM city, Civilization) ● Share research using digital presentation tools ● Begin to recognize potential bias in websites ● Cite all sources 	<ul style="list-style-type: none"> ● Share solutions using digital tools ● Use digital simulations to find a solution or make decisions (e.g. Minecraft, SIM city, Civilization) ● Share research using digital presentation tools ● Recognize potential bias in websites ● Cite all sources
Examples for Technology Rich Environment		
	<ul style="list-style-type: none"> ● Present solutions to a panel using digital tools to determine best solution 	<ul style="list-style-type: none"> ● Use classroom blogs to brainstorm solutions ● Analyze survey data using a spreadsheet

Other examples from school’s localization:

ISTE STANDARD 5: Digital citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

- Advocate and practice safe, legal, and responsible use of information and technology
- Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
- Demonstrate personal responsibility for lifelong learning
- Exhibit leadership for digital citizenship

3	4	5
Examples Technology Minimal and Rich Environment		
<ul style="list-style-type: none"> ● Know not to click on pop-ups or advertisements ● Use a secure password to protect the privacy of information ● Create and use an anonymous online name ● Participate in class discussion about online safety and when to share personal information ● Recognize and report cyberbullying ● Demonstrate respect for the digital work and opinion of others ● Identify the differences between ethical and unethical behavior ● Describe appropriate and inappropriate use of the creative digital work of others 	<ul style="list-style-type: none"> ● Understand why not to click on pop-ups or advertisements ● Use a secure password to protect the privacy of information ● Create and use an anonymous online name ● Participate in class discussion about online safety and when to share personal information ● Recognize and report cyberbullying ● Demonstrate respect for the digital work and opinions of others ● Identify there are consequences of unethical uses of technology ● Describe appropriate and inappropriate use of the creative digital work of others ● Comply with copyright law when copying and pasting from websites 	<ul style="list-style-type: none"> ● Explain why not to click on pop-ups or advertisements ● Use a secure password to protect the privacy of information ● Create and use an anonymous online name ● Participate in class discussion about online safety and when to share personal information ● Recognize and report cyberbullying ● Demonstrate respect for the digital work of others and opinions of others posted online ● Describe the impact of unethical and illegal use of technology on individuals and society ● Describe appropriate and inappropriate use of the creative digital work of others ● Comply with copyright law when copying and pasting from websites

Other examples from school's localization:

ISTE STANDARD 6: Technology operations and concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations.

- Understand and use technology systems
- Select and use applications effectively and productively
- Troubleshoot systems and applications
- Transfer current knowledge to learning of new technologies

3	4	5
Examples for Technology Minimal Environment		
<ul style="list-style-type: none"> • Use correct vocabulary to describe digital technologies • Meet keyboarding proficiency standards for grade level • Use age appropriate keyboarding programs to increase speed and accuracy • Demonstrate correct posture consistently • Use basic file commands • Demonstrate proper use and care of digital equipment • Identify and solve common problems related to digital equipment • Use common features of a: <ul style="list-style-type: none"> ✓ Word processing or publishing program. ✓ Spreadsheet program. ✓ Presentation program. ✓ Database program (or database functionality in other programs) • Recognize basic web browser navigation • Use teacher bookmarked websites 	<ul style="list-style-type: none"> • Use correct vocabulary to describe digital technologies • Meet keyboarding proficiency standards for grade level • Use age appropriate keyboarding programs to increase speed and accuracy • Use shortcut keys to increase speed • Save or backup information to appropriate location (e.g., local, network, external drives or cloud) • Organize and manage files and folders • Demonstrate proper use and care of digital equipment • Identify and solve common problems related to digital equipment • Use common features of a: <ul style="list-style-type: none"> ✓ Word processing or publishing program ✓ Spreadsheet program ✓ Presentation program ✓ Database program (or database functionality in other programs) • Use a search engine or an online database to find information • Read classroom website, wikis or blogs • Use refine search features 	<ul style="list-style-type: none"> • Use correct vocabulary to describe digital technologies • Meet keyboarding proficiency standards for grade level • Demonstrate the correct use of all letters, numbers, punctuation keys, shift, enter, symbol and command keys using proper techniques • Save or backup information to appropriate location (e.g., local, network, external drives or cloud) • Organize and manage files and folders • Demonstrate proper use and care of digital equipment • Identify and solve common problems related to digital equipment • Use common features of a: <ul style="list-style-type: none"> ✓ Word processing or publishing program. ✓ Spreadsheet program. ✓ Presentation program • Database program • Identify and use proper file formats (e.g., .doc, .docx, .jpeg, .txt) • Use interactive online tools to comment, link, post and embed information at a beginning level (e.g., wikis, blogs) • Use refine search features

Other examples from school's localization:

Grades Sixth ~ Eighth

ISTE STANDARD 1: Creativity and Innovation

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

- Apply existing knowledge to generate new ideas, products, or processes
- Create original works as a means of personal or group expression
- Use models and simulations to explore complex systems and issues
- Identify trends and forecast possibility

6	7	8
Examples for Minimal Technology Environments		
<ul style="list-style-type: none"> ● Use spreadsheet software to display poll or survey data 	<ul style="list-style-type: none"> ● Create and publish digital stories to a blog for peer review 	<ul style="list-style-type: none"> ● Participate in simulations (e.g., body systems, online math manipulatives, science simulations or robotics, economic simulation)
Examples for Technology Rich Environments		
<ul style="list-style-type: none"> ● Create blogs, wikis or other collaborative forums to share ideas ● Collect real time data and examine its meaning or implication using spreadsheet software ● Create a podcast to report results or share solutions ● Use multimedia software at a basic level to edit, build transitions, add text, add audio, and publish ● Build a narrative using digital storyboards ● Integrate graphs from a spreadsheet into a report or presentation 	<ul style="list-style-type: none"> ● Enhance web pages, blogs and wikis by adding graphics, sound, music, and videos ● Create a podcast or video to report results or share solutions ● Create a list of images (shot list) to prepare for a video production (e.g., local historical sites) ● Construct a narration track for an existing video (e.g., describe locations and their historical significance) ● Generate a report in a tri-fold format including charts and images 	<ul style="list-style-type: none"> ● Construct a poll or survey to gather data using an interactive digital tool ● Create a collaborative website to report results or share solutions ● Produce a video interview of a historical figure (e.g., students dress and act as the figure and discuss their contributions) ● Create an animated storybook for early elementary students

Other examples from school's localization:

ISTE STANDARD 2: Communication and Collaboration

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

- Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media
- Communicate information and ideas effectively to multiple audiences using a variety of media and formats
- Develop cultural understanding and global awareness by engaging with learners of other cultures
- Contribute to project teams to produce original works or solve problems

6	7	8
Examples for Minimal Technology Environments		
<ul style="list-style-type: none"> • Show or explain completed work with digital tools • Create and share a group digital project (e.g., newspaper, flyer, movie, or slide presentation) • Discover other cultures through emailing pen pals 	<ul style="list-style-type: none"> • Show or explain completed work with digital tools • Create a video interview of someone in the community connected to a curriculum unit 	<ul style="list-style-type: none"> • Create multimedia products that promote community resources • Create a multimedia presentation that targets various audiences using the same topic
Examples for Technology Rich Environments		
<ul style="list-style-type: none"> • Comment on a writing project using online tools (e.g., a blog, wiki) • Participate in a live video conference • Communicate with teachers using appropriate email etiquette 	<ul style="list-style-type: none"> • Use videoconferencing to participate in a distance collaborative project • Collaborate in online teams to learn about a specific topic • Communicate appropriately with peers and teachers using email 	<ul style="list-style-type: none"> • Debate a topic using online tools (e.g., blogs, wikis) • Discuss a current topic (e.g., cultural, environmental, religious) with a class in a different city, state, or country using online tools (e.g., conferencing software, blogs, wikis, learning management systems) • Communicate appropriately with peers, teachers and individuals or organizations outside the school using email

Other examples from school's localization:

ISTE STANDARD 3: Research and information fluency

Students apply digital tools to gather, evaluate, and use information.

- Plan strategies to guide inquiry
- Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- Evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- Process data and report results

6	7	8
Examples for Minimal Technology Environments		
<ul style="list-style-type: none"> ● Refine searches to improve search results ● Use digital tools to organize information for research projects ● Compare the quality of information from multiple sources 	<ul style="list-style-type: none"> ● Use Boolean operators to improve search results ● Select digital tools to organize information for research projects ● Evaluate web sites for accuracy, relevancy, and bias 	<ul style="list-style-type: none"> ● Use Boolean operators to improve search results ● Select digital tools to organize information for research projects ● Evaluate web sites for accuracy, relevancy, and bias
Examples for Technology Rich Environments		
<ul style="list-style-type: none"> ● Discover and listen to podcasts to gain information ● Tag and share bookmarked sites 	<ul style="list-style-type: none"> ● Use classroom wikis, blogs, or websites to collect and organize online resources ● Tag and share bookmarked sites 	<ul style="list-style-type: none"> ● Use digital note cards, bookmarking, or online storage resources when conducting research ● Use classroom wikis, blogs, or websites to collect and organize online resources ● Tag and share bookmarked sites

Other examples from school's localization:

ISTE STANDARD 4: Critical thinking, problem solving, and decision making

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

- 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

6	7	8
Examples for Minimal Technology Environments		
<ul style="list-style-type: none"> ● Determine which digital tools are appropriate to use for solving problems, creating projects, and conducting research ● Identify and understand the different prominent domain names (e.g., .gov, .net, .com, .edu) ● Explain how copyright law protects an author's original work ● Combine information from separate sources to produce, support, and counter arguments ● Recognize bias in websites 	<ul style="list-style-type: none"> ● Determine which digital tools are appropriate to use for solving problems, creating projects, and conducting research ● Explore the different intellectual property licenses (e.g., creative commons, open source, copyrighted material) ● Discuss implications of domain names and investigate sources for credibility, validity, and potential bias (e.g., .gov, .net, .com, .edu) ● Combine information from separate sources to produce, support, and counter arguments 	<ul style="list-style-type: none"> ● Determine which digital tools are appropriate to use for solving problems, creating projects, and conducting research ● Use digital bibliography tools to site and organize sources for research projects ● Discuss implications of domain names and investigate sources for credibility, validity, and potential bias (e.g., .gov, .net, .com, .edu) ● Combine information from separate sources to produce, support, and counter arguments
Examples for Technology Rich Environments		
<ul style="list-style-type: none"> ● Create an electronic chart or graph from survey results to justify a decision or solution to a problem 	<ul style="list-style-type: none"> ● Use audience feedback through a blog to evaluate student writing 	<ul style="list-style-type: none"> ● Use audience feedback through response systems or blogs to compare and contrast possible solutions to a problem

Other examples from school's localization:

ISTE STANDARD 5: Digital citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

- Advocate and practice safe, legal, and responsible use of information and technology
- Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
- Demonstrate personal responsibility for lifelong learning
- Exhibit leadership for digital citizenship

6	7	8
Examples for All Technology Environments		
<ul style="list-style-type: none"> ● Know not to click on pop-ups or advertisements ● Use a secure password to protect the privacy of information ● Create and use an anonymous online name. ● Participate in class discussion about online safety and when to share personal information ● Recognize and report cyberbullying ● Demonstrate respect for the digital work and opinion of others ● Identify the differences between ethical and unethical behavior ● Describe appropriate and inappropriate use of the creative digital work of others ● Understand password security, privacy, and anonymity ● Recognize different types of illegal and unethical technology use ● Identify and cite <i>Creative Commons</i> images in digital presentations ● Respect the principles of copyright/plagiarism by citing all sources properly 	<ul style="list-style-type: none"> ● Understand passwords, privacy, anonymity, and recognize spam, phishing, fraud, and identity theft ● Identify the impact of unethical use of technology (e.g., hacking, plagiarism, pirating) ● Use <i>Creative Commons</i>, public domain or self-created music, images, and/or video in presentations ● Respect the principles of copyright/plagiarism by citing all sources properly 	<ul style="list-style-type: none"> ● Understand passwords, privacy, anonymity, and recognize spam, phishing, fraud, and identity theft ● Explain the legal consequences of breaking acceptable use policies ● Use <i>Creative Commons</i>, public domain, or self-created music, images and/or video in presentations ● Respect the principles of copyright/plagiarism by citing all sources properly

Other examples from school's localization:

ISTE STANDARD 6: Technology operations and concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations.

- Understand and use technology systems
- Select and use applications effectively and productively
- Troubleshoot systems and applications
- Transfer current knowledge to learning of new technologies

6	7	8
Examples for All Technology Environments		
<ul style="list-style-type: none"> ● Apply keyboarding skills to increase speed and accuracy ● Save or backup information to appropriate location (e.g., local, network or external drives) ● Organize and manage files and folders between school, home, and online ● Troubleshoot wired and wireless connectivity issues ● Use productivity applications (e.g., documents, spreadsheets, presentations) 	<ul style="list-style-type: none"> ● Meet keyboarding proficiency standards ● Understand sharing rights for a variety of storage applications (e.g., local, network, or cloud storage) ● Organize and manage files and folders between school, home, and online ● Troubleshoot wired and wireless connectivity issues ● Use productivity applications (e.g., documents, spreadsheets, presentations) regardless of platform ● Use a word processor to format a paper so that it conforms to the guidelines in a style manual (e.g. MLA) 	<ul style="list-style-type: none"> ● Meet keyboarding proficiency standards ● Use sharing rights independently for a variety of storage media (e.g., local, network, or external drives) ● Organize and manage files and folders between school, home, and online ● Troubleshoot issues with wired and wireless connectivity, individual application, printing, and devices ● Use productivity applications (e.g., documents, spreadsheets, presentations) on various platforms ● Use a word processor to format a paper in MLA style ● Recognize similarities between applications and transfer skills between programs

Other examples from school's localization: