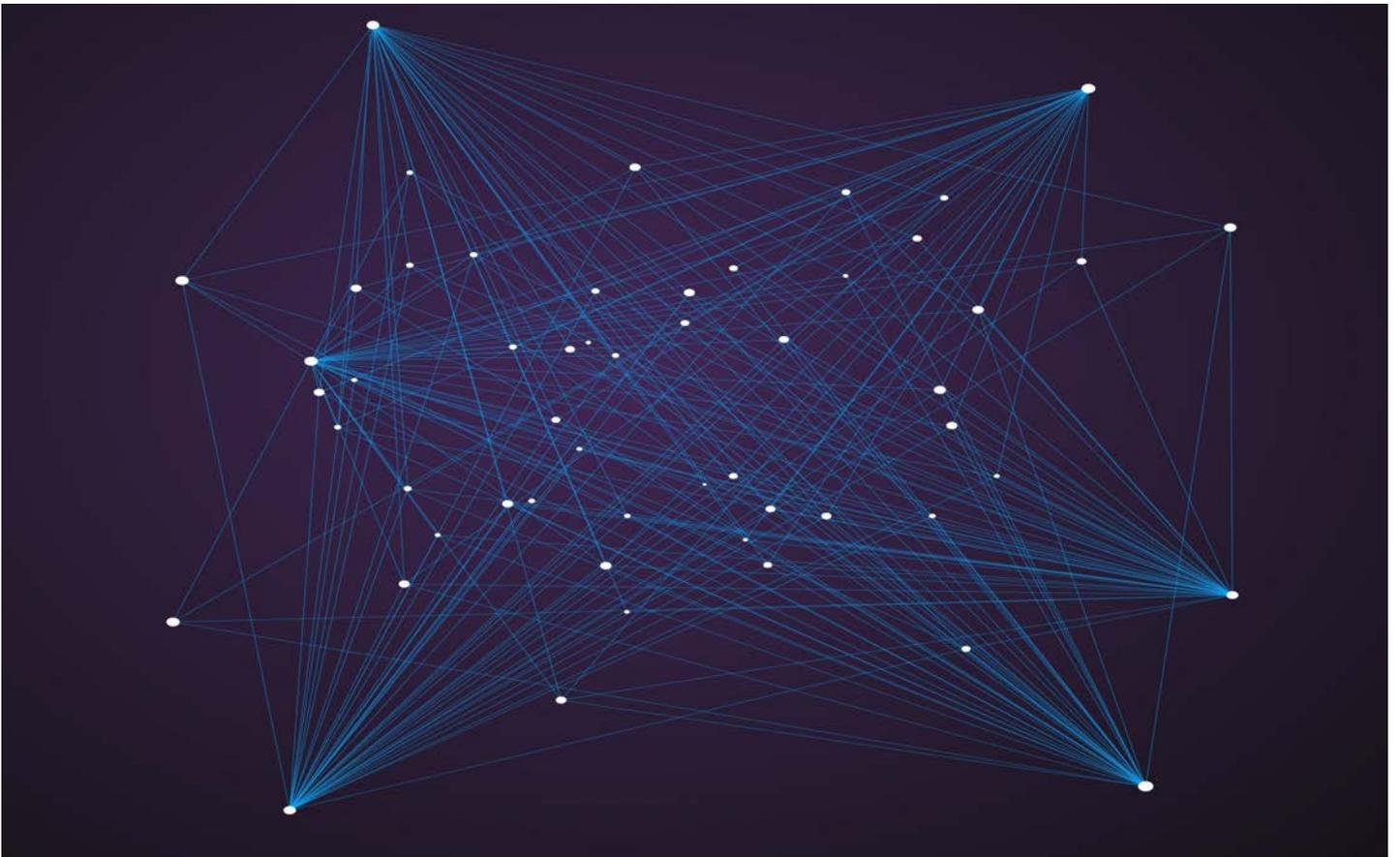


DEPARTMENT OF CATHOLIC SCHOOLS

2020-2021

TECHNOLOGY



ARCHDIOCESE
OF PORTLAND **IN**
OREGON

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PHILOSOPHY STATEMENT FOR TECHNOLOGY

All schools in the Archdiocese of Portland in Oregon are committed to empowering students to become lifelong learners with Catholic values and moral decision-making in a digital age. In partnership with families and with collaboration among teachers, we are dedicated to building a technological foundation in our students, so they become leaders who are able to solve problems and advance humanity in the context of our Catholic faith. Our students are challenged across integrated curricula to be authentic and Christ-like in all applications of technology.



GOALS FOR TEACHING AND LEARNING

Teacher Goals

- Act as responsible digital citizens modeling Catholic morals, ethics, and values.
- Collaborate to integrate technology in all areas of the curriculum.
- Demonstrate fluency and continual growth in technology knowledge and stay current in emerging technologies.

Student Goals

- Act as responsible digital citizens modeling Catholic morals, ethics, and values.
- Utilize technology effectively, appropriately, and responsibly across the curriculum.
- Apply technology creatively, innovatively, and with integrity to problem-solve and produce original works.
- Use technology to communicate and collaborate with multiple audiences both locally and globally.
- Demonstrate a sound understanding of technological concepts, systems, and operations.

PROCESS

The Technology Committee for the Archdiocese of Portland started with a review of the 2011 TEchnology Standards and the [ISTE Standards for Students](#) as the overall basis for this document. In an effort to revise the broad standards presented by ISTE, the [Washington State Standards for Technology](#) were also reviewed. Following the same approach as Washington State Standards, the Technology Committee reviewed each ISTE standard and each component of the seven standards, applied them to each grade band, and rewrote the standards accordingly. Student examples were also provided.

CONTENT STANDARDS IN TECHNOLOGY: Kindergarten-Second Grade

Power Standards in **BOLD**. Performance Examples under each Standard.

EMPOWERED LEARNER

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

Archdiocese of Portland Standards:

- 1a. With guidance from an educator, students consider and set personal learning goals and utilize appropriate technologies that will demonstrate knowledge and reflection of the process.
Performance Examples:
- Students complete exit tickets (e.g. digitally utilizing electronic forms or feedback tools) for quick formative reflection (e.g., gathering exit task information).
 - Students track their keyboarding progress throughout the year.
- 1b. **With guidance from an educator, students make their learning environments personal and select resources from those available to enhance their learning.**
Performance Examples:
- Students learn about various technologies that can be used to connect to others in a secure environment (e.g. SeeSaw, Google Meet, etc.).
 - Students participate in teacher-led connections with current events both in and outside the student's community (e.g., Edublogs, virtual field trips, etc.).
 - With guidance and support from adults, students use tools such as highlighting, video, text-to-speech, and audio, to make content accessible.
- 1c. With guidance from an educator, students recognize performance feedback from digital tools, make adjustments based on that feedback, and use age-appropriate technology to share learning.
Performance Examples:
- Students type a grade-appropriate writing sample on a Google Doc, and the educator will leave a comment for students to edit their work.
 - Students use feedback from pre-coding programs to correct their work (e.g. Kodable, Code.org, etc.).
- 1d. With guidance from an educator, students explore a variety of technologies that will help them in their learning and begin to demonstrate an understanding of how knowledge can be transferred between tools.
Performance Examples:
- Students develop basic skills for locating and using information with digital tools and resources (e.g. search engine).
 - Students learn how to choose and transfer information from one digital platform to another (e.g., maps, images, etc.).

DIGITAL CITIZEN

ISTE Standard: 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.

Archdiocese of Portland Standards:

- 2a. **Students practice responsible use of technology through teacher-guided online activities and interactions to understand how the digital space impacts their life. Students understand that technology is a gift from God, to be used to spread God's loving message.**
Performance Examples:
- Students identify both positive and negative impacts technology can have on them, integrating an element of Catholic morality (e.g.: "Golden Rule")
 - Students explain how information shared online leaves a digital footprint or "trail."
- 2b. **With guidance from an educator, students understand how to be careful when using devices and how to be safe and kind online, follow safety rules when using the internet and collaborate with others. Students understand the importance and value of practicing good stewardship.**
Performance Examples:
- Students can explain the potential implications of interacting with others online with age-appropriate examples.
 - Students can explain the difference between information that is likely safe and appropriate to share online, and information that should be kept private. (e.g. personal information).
- 2c. With guidance from an educator, students learn about ownership and sharing of information, and how to respect the work of others as fellow brothers and sisters in God.
Performance Examples:
- Students understand and can articulate the importance of respecting others' belongings as they apply to digital content and information, along with a tie-in with Catholic morality (e.g. Thou shall not steal)
 - Students can locate an author and/or title for a digital resource.
 - Students understand that some digital content may be created by a company and not a single person.
- 2d. **With guidance from an educator, students demonstrate the importance of keeping their information private. Students can explain how doing so is an example of respecting one's self as a child of God.**
Performance Examples:
- Students can explain basic steps to follow when choosing a website to use for personal use (e.g., games).
 - Students can explain why they shouldn't enter their personal information into a website, online game system, etc. without adult supervision).

CONTENT STANDARDS IN TECHNOLOGY: Kindergarten-Second Grade

Power Standards in **BOLD**. Performance Examples under each Standard.

KNOWLEDGE CONSTRUCTOR

ISTE Standard: 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.

Archdiocese of Portland Standards:

3a. With guidance from an educator, students use digital tools and resources, contained within a classroom platform or otherwise provided by the teacher, to find information on topics of interest.

Performance Examples:

- Students are able to identify simple search terms to find information in a digital resource (e.g. search engine, library catalog)
- Students can use basic search tools in an age-appropriate digital resource.

3b. With guidance from an educator, students become familiar with age-appropriate criteria for evaluating digital content.

Performance Examples:

- Students can apply basic questions to help them evaluate whether a digital resource is a good fit for them (e.g., the correct reading level).
- Students can identify relevant sources and sources that are grade-appropriate.

3c. With guidance from an educator, students explore ways to augment, organize, and/or make connections to their learning through adding or utilizing various forms of media.

Performance Examples:

- With guidance, students use digital learning tools to add audio or visual media to clarify information.
- Students can use digital organizers as a class or with a partner to support classroom learning.

3d. With guidance from an educator, students explore real-world topics and share their ideas about them with others.

Performance Examples:

- Students utilize diverse media formats (e.g., website, images, videos) to report on shared topics.

INNOVATIVE DESIGNER

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

Archdiocese of Portland Standards:

4a. With guidance from an educator, students ask questions, suggest solutions, test ideas to solve problems, and share their learning.

Performance Examples:

- Students use journaling to show progress.
- Students share examples of the design process in science (e.g., inventions such as the lightbulb, airplanes, cars).
- Students use digital tools to record/save questions, digital drawings... to share solutions.

4b. Students use age-appropriate digital and non-digital tools to design something and are aware of the step-by-step process of designing.

Performance Examples:

- Students record their step-by-step process
- Students participate in maker space/STEM activities.
- Students use programs to do coding/pre-coding activities (e.g. Kodable, code.org, etc.).

4c. Students use a digital or non-digital design process to develop ideas or creations, and they test their design and redesign if necessary.

Performance Examples:

- Students use storyboarding, planning, and revision.
- Students create a coding program or debug a coding program to complete an objective (e.g. Lego Robotics, code.org, Minecraft, Scratch Jr., etc.).
- Students participate in maker space/STEM activities.

4d. Students demonstrate perseverance when working to complete a challenging task and develop the capacity to work with open-ended problems.

Performance Examples:

- Students show patience with difficult problems and in situations where technology does not work as it should.
- Students exhibit a growth mindset regarding potential barriers or opportunities.

COMPUTATIONAL THINKER

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

Archdiocese of Portland Standards:

5a. With guidance from an educator, students identify a problem and select appropriate technology tools to explore and find solutions.

Examples:

- Students participate in makerspace/STEM activities.
- Given a variety of resources students self-select an appropriate resource to solve the identified problem, be it digital, or not.

5b. With guidance from an educator, students analyze age-appropriate data and look for similarities to identify patterns and categories.

Examples:

- Students can collect data (e.g., rain gauge, windmill, STEM activities) and create charts/graphs, either individually or collectively as a class.
- Students can find patterns and sort and categorize various item/data.

CONTENT STANDARDS IN TECHNOLOGY: Kindergarten-Second Grade

Power Standards in **BOLD**. Examples under each Standard.

COMPUTATIONAL THINKER - continued

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

Archdiocese of Portland Standards:

5c. With guidance from an educator, students break a problem into parts and identify ways to solve the problem.

Examples:

- Students use storyboarding, planning, and revision.
- Students create a coding program or debug a coding program to complete an objective (e.g. Lego Robotics, code.org, Minecraft, Scratch Jr., etc.).
- Students participate in maker space/STEM activities.

Students understand how technology is used to make a task easier or repeatable and can identify real-world examples.

5d. Examples:

- Students show patience with difficult problems and in situations where technology does not work as it should.
- Students exhibit a growth mindset regarding potential barriers or opportunities.

CREATIVE COMMUNICATOR

ISTE Standard: 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.

Archdiocese of Portland Standards:

6a. With guidance from an educator, students choose different tools for creating something new or for communicating with others.

Performance Examples:

- Students select appropriate digital learning tools and resources to produce and publish information (e.g. students know that Word or Docs is used for typewriting OR students can use SeeSaw to communicate digitally).

6b. Students use digital tools to create original works.

Performance Example:

- Students create digital works (e.g., using video, music, animation, or various draw or paint applications and the like).
- Students listen to a story and use a digital art tool to create a moment from the story.

6c. With guidance from an educator, students share ideas in multiple ways-visual, audio, etc.

Performance Examples:

- Students can use a document camera, present their work to classmates, electronic graphs, digital drawing programs, digital simulations, different presentation platforms, and the like.

6d. With guidance from an educator, students select a technology to share their ideas with other people in their community.

Performance Examples:

- Students can select appropriate digital tools to create their products and presentations.
- Students discuss and identify communication needs considering the task, situation, and information to be shared digitally. * Students identify the proper tool for the proper situation.

GLOBAL COLLABORATOR

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

Archdiocese of Portland Standards:

7a. With guidance from an educator, students use technology to exchange ideas with a classmate or other person using empathy.

Performance Examples:

- Students select appropriate digital learning tools and resources to produce and publish information (e.g. students know that Word or Docs is used for typewriting OR students can use SeeSaw to communicate digitally).

7b. With guidance from an educator, students use technology to consider others' perspectives and to resolve conflicts amicably.

Performance Example:

- Students use a variety of technologies to understand differing perspectives.
- With teacher guidance, students read about other perspectives on age-appropriate digital platforms (e.g. Scholastic News, etc.).

7c. With guidance from an educator, students take on different team roles and use age-appropriate technologies to complete projects.

Performance Examples:

- Students work collaboratively to create a digital product (e.g., slideshow, concept mapping/webbing, video, poster, text document), and assume roles such as writer, recorder, editor, or graphics artist.
- Students work collaboratively to solve a digital problem (e.g. pair-coding, TuxPaint, etc.).

7d. With guidance from an educator, students use age-appropriate technologies to work together to understand/interact with global and local topics and suggest solutions.

Performance Examples:

- Students discuss a real-life issue and suggest potential digital solutions (e.g. sponsoring a local/global family or community by donating money using digital platforms).

CONTENT STANDARDS IN TECHNOLOGY: Third Grade - Fifth Grade

Power Standards in **BOLD**. Performance Examples under each Standard.

EMPOWERED LEARNER

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

Archdiocese of Portland Standards:

- 1a. Students develop learning goals in collaboration with an educator, select the technology tools to achieve them, and reflect on and revise the learning process as needed to achieve goals.
Performance Examples:
- With guidance, students identify and use digital learning tools or resources to support planning, implementing, and reflecting upon a defined task (e.g. exit tickets).
 - Students explain their choice of selected digital learning tools and resources to support productivity and learning (e.g. Google Forms, Kahoot, etc.).
- 1b. **With the oversight and support of an educator, students learn about various technologies that can be used to connect with others and recognize peer experts in order to enhance their learning.**
Performance Examples:
- Class recognizes peer experts on specific technologies (e.g. a student with a particular acumen in coding or word processing) to help them in their learning.
 - Students understand how to use digital platforms related to their learning (e.g. SeeSaw, Google Classroom, etc.).
- 1c. Students recognize performance feedback from digital tools and others, make adjustments based on that feedback, and use age-appropriate technology to share learning.
Performance Examples:
- Students evaluate the various features of digital learning tools (e.g. looking at the feedback given on code.org to fix their coding)
 - Students create a digital piece of writing or presentation and use collaborative digital tools to solicit teacher and peer feedback to help make edits, as appropriate (e.g., spell and grammar check).
- 1d. Students explore age-appropriate technologies and begin to transfer their learning to different tools or learning environments.
Performance Examples:
- Students collect and evaluate data, and create visual displays using the technology tool of their choice.
 - Students can transfer knowledge using two or more platforms (e.g. transfer knowledge from a map to a Google Doc to write an essay).

DIGITAL CITIZEN

ISTE Standard: 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.

Archdiocese of Portland Standards:

- 2a. **Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world (i.e. digital footprint). Students understand that technology is a gift from God, to be used to spread God's loving message.**
Performance Examples:
- Students demonstrate appropriate use of technology and explain the importance of responsible and ethical technology use.
 - Students exercise digital etiquette when communicating and collaborating.
 - Students learn the concept of "think before you act" when applied to technology.
- 2b. **Students engage in positive, safe, legal, and ethical behavior when using technology, including social interactions online or when using devices. Students understand the importance and value of practicing good stewardship.**
Performance Examples:
- Students follow Catholic values by demonstrating appropriate use of technology and explaining the importance of responsible and ethical technology use.
 - Students exercise digital etiquette when communicating and collaborating.
 - Students identify and discuss laws and rules that apply to digital content and information (e. g., copyright laws)
- 2c. **Students learn about, demonstrate and encourage respect for intellectual property with both print and digital media when using and sharing the work of others as fellow brothers and sisters in God.**
Performance Examples:
- Students explain basic concepts of plagiarism and copyright.
 - Students list the referenced website URL or the source of their work.
 - Students identify and discuss laws and rules that apply to digital content and information (e. g., copyright laws).
- 2d. **Students demonstrate an understanding of what personal data is, how to keep it private and how it might be shared online. Students can explain how doing so is an example of respecting one's self as a child of God.**
Performance Examples:
- Students demonstrate an understanding of different levels of security when using personal information and passwords.
 - Students understand the consequences of sharing information online whether positive or negative.
 - Students know whom they can share information with safely.

CONTENT STANDARDS IN TECHNOLOGY: Third Grade - Fifth Grade

Power Standards in **BOLD**. Performance Examples under each Standard.

KNOWLEDGE CONSTRUCTOR

ISTE Standard: 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.

Archdiocese of Portland Standards:

3a. Students collaborate with a teacher to employ age-appropriate research techniques to locate digital resources that will help them in their learning process.

Performance Examples:

- Students use digital tools to identify questions related to a topic of interest to broaden or narrow the topic as needed.
- Students use a variety of appropriate search techniques to locate needed information using digital learning tools and resources.
- Students gather, organize and summarize information from multiple digital tools and resources to build knowledge of a topic.

3b. Students learn how to evaluate digital sources for accuracy, credibility, and relevance.

Performance Examples:

- With guidance, students use multiple criteria to differentiate between relevant and irrelevant information found with digital learning tools and resources.
- Students can identify a "fake website," phishing emails, or a website with incorrect information.

3c. Using a variety of strategies, students explore ways to augment, organize, and/or make connections to their learning through adding or utilizing various forms of media.

Performance Examples:

- Students interpret and analyze images, diagrams, maps, graphs, infographics, videos, animations, etc. in digital learning tools and resources to clarify and add to knowledge.
- Students use digital tools to analyze observations and data collected to determine if patterns are present.
- Students create a multimedia presentation organizing information gathered from sources (e.g. PowerPoint, Google Slides, Prezi).

3d. Students explore real-world topics and share their ideas with others.

Performance Examples:

- Students work collaboratively using technology to identify and analyze a solution to a problem.
- Students identify a problem in their daily life and come up with an applicable, constructive solution using technology to solve it.
- Students research a real-world topic and discuss perspectives on this topic using digital platforms.

INOVATIVE DESIGNER

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

Archdiocese of Portland Standards:

4a. Students explore and practice how a design process works to generate ideas, consider solutions, and develop and implement a plan.

Performance Examples:

- Students plan and implement a design process: identify a problem, think about ways to solve the problem, develop possible solutions, test and evaluate solution(s), present a possible solution, and redesign to improve the possible solution.
- Design a solution for real-world issues and Maker & STEAM projects.

4b. Students use digital and non-digital tools to plan and manage a design process.

Performance Examples:

- Students generate ideas for a variety of projects (e.g., book talks, informational video, narrative story) using digital storyboard tools.
- Students generate ideas using digital brainstorming tools, flow charts, drawing or markup, 2D or 3D computer design software, note-taking tools, project management tools.

4c. Students develop, test, and refine ideas as part of a cyclical design process.

Performance Examples:

- Students generate, develop and communicate design ideas and decisions using appropriate terms. • Implement a design, put it through testing, redesign, retest, and reflect on the process.

4d. Students demonstrate perseverance when working to complete a challenging task and develop the capacity to work with open-ended problems.

Performance Examples:

- Students are given an engineering design challenge, with an end goal in mind, and work through the process collaboratively to simulate, record, reiterate, or present solutions.

COMPUTATIONAL THINKER

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

Archdiocese of Portland Standards:

5a. Students select age-appropriate technology for data analysis, modeling, or algorithmic thinking to explore and find solutions or understand information.

Performance Examples:

- Using digital tools, students compare data to create a visually appropriate graphical representation of the data (e.g., line graphs, circle graphs, bar graphs, etc.).
- Students use algorithmic thinking to code a program.

CONTENT STANDARDS IN TECHNOLOGY: Third Grade - Fifth Grade

Power Standards in **BOLD**. Examples under each Standard.

COMPUTATIONAL THINKER - continued

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

Archdiocese of Portland Standards:

- 5b. Students select effective technology to represent data in various ways to facilitate problem-solving and decision-making.
Performance Examples:
- With guidance, students select media formats appropriate to content and audience (e.g. Google Slides, video, etc.).
- 5c. Students break down problems into smaller parts, identify key information, and propose solutions.
Performance Examples:
- Students create and test solutions to a given problem through the use of coding activities.
- 5d. Students understand and explore basic concepts related to automation, patterns, and algorithmic thinking.**
Performance Examples:
- Students describe a process as a series of actions and how it is used to produce a result and explain how controls use information to cause systems to change, like a home thermostat turning on the heat based on the low temperature of a room.
 - Students use coding program (e.g. Scratch) to understand "if-then" statements, "input-output," or "feedback loops."

CREATIVE COMMUNICATOR

ISTE Standard: 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.

Archdiocese of Portland Standards:

- 6a. Students recognize and utilize the features and functions of a variety of creation or communication tools and platforms.
Performance Examples:
- Students can compare and contrast the different features of the software.
- 6b. Students use digital tools to create original works.**
Performance Examples:
- Students choose from a variety of digital tools to feature a narrative, expository, or other pieces of creative work (e.g. film, games, videos, storybooks, etc.).
- 6c. Students share ideas in multiple digital representations, such as visual, audio, etc.**
Performance Examples:
- Students use digital tools to create an infographic, flowchart, or timeline.
 - Students create multimedia presentations.
- 6d. Students create digital artifacts and presentations with consideration of their intended audience.
Performance Examples:
- With guidance, students discuss and identify digital communication needs considering goals, audience, and content.
 - Students decide between a word processor, a slideshow, or a video to present information based on their audience and content.

GLOBAL COLLABORATOR

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

Archdiocese of Portland Standards:

- 7a. Students use digital tools to work with learners from different backgrounds or cultures using empathy.
Performance Examples:
- Students create a plan and select collaboration and/or communication tools to complete a given task.
 - Students identify the positive and negative impact the use of technology can have on relationships, communities, and self.
 - Students use digital tools to seek feedback from other groups in their class or students at another grade level.
- 7b. Students use collaborative technologies to connect with others, including peers, experts, and community members, to explore different points of view on various topics.
Performance Examples:
- Using digital tools, students connect with other classes in different regions around their state to discuss ideas.
 - Students post, compare and discuss data related to an issue to share with another group, class, or community to broaden awareness.
 - Students use digital tools to discuss ideas on a common text or media collection.
- 7c. Students perform a variety of roles within a team using age-appropriate technology to work effectively towards a common goal.**
Performance Examples:
- Students use digital tools and assigned roles to create a digital presentation addressing a project or solving a problem (e.g., present the steps used to complete a design and engineering task in science like designing, testing, and refining a device that converts energy from one form to another).
 - Students could create a public service announcement on a health issue by taking on different roles in the production (e.g., sound editing, graphic design, scriptwriting, etc.).
 - Students could create a documentary about a historical topic using a range of digital tools and resources (e.g., mock interviews, archived photos, etc.).
- 7d. Students work with others using collaborative tech to understand/interact with global and local topics and suggest solutions.
Performance Examples:
- Students identify positive and negative impacts their use of personal technology and technology systems (e.g., agriculture, transportation, energy generation, water treatment) can have on their community.

CONTENT STANDARDS IN TECHNOLOGY: Sixth Grade - Eighth Grade

Power Standards in **BOLD**. Performance Examples under each Standard.

EMPOWERED LEARNER

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

Archdiocese of Portland Standards:

1a. Students articulate personal learning goals, select and manage appropriate technologies to achieve them, and reflect on their successes and areas of improvement in working toward their goals.

Performance Examples:

- Students create digital portfolios.
- Students identify technology tools and resources best able to assist them in their learning and justify the rationale for their selection.
- Students set personal learning goals and use online tools to share and reflect on their learning.

1b. Students identify and develop online networks within school policy and customize their learning environments in ways that support their learning, in collaboration with an educator.

Performance Examples:

- Students participate in school-approved online groups to support learning (e.g., online discussion boards through a Learning Management System, Shared documents).
- Students use school-approved collaborative and sharing groups to network and get assistance from teachers and peers.

1c. Students use technology to seek feedback that informs and improves their practice and to demonstrate learning in a variety of ways.

Performance Examples:

- Students use interactive digital tools to create online polls or surveys to gather data to help guide and assess information during the learning process.
- Students comment on writing projects using online tools (e.g. blogs, online discussions, comments on live documents, etc.).
- Students solicit feedback for their ideas using digital tools.

1d. Students are able to navigate a variety of technologies and transfer their knowledge and skills to learn how to use new technologies.

Performance Examples:

- Students use a variety of devices (e.g., mobile devices and computers) to support planning, implementing, and reflecting upon a defined task.
- Students apply their knowledge and skills from existing technologies and devices to successfully use new technologies.
- Students develop criteria for selecting digital learning tools and resources to accomplish a defined task.
- Students identify a product and describe how people from different disciplines combined their skills in the design and production of the product.

DIGITAL CITIZEN

ISTE Standard: 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.

Archdiocese of Portland Standards:

2a. Students manage their digital identities and reputations within school acceptable-use policy, including demonstrating an understanding of how digital actions are never fully erasable.

Performance Examples:

- Students participate in class discussions about media literacy and online safety.
- Students demonstrate knowledge of core concepts and key questions of media literacy.
- Students demonstrate knowledge of when to share personal information.
- Students identify the differences between ethical and unethical online and digital use behavior.
- Students identify the consequences of unethical uses of technology within the lens of Catholic values.
- Students are aware that what goes online is never completely erased and can be easily replicated and reused for unintended purposes.

2b. Students demonstrate and advocate for positive, safe, legal, and ethical habits when using technology and when interacting with others online.

Performance Examples:

- Students lead or participate in class discussions about media literacy and online safety.
- Students identify the differences between ethical and unethical online and digital use behavior.
- Students identify the consequences of unethical uses of technology.
- Students understand that technology is a gift from God and should be used properly.
- Students explain the positive and negative impact the use of technology can have on personal, professional, and community relationships.

2c. Students demonstrate and advocate for an understanding of used, shared, and created intellectual property.

Performance Examples:

- Students identify the differences between ethical and unethical online and digital use behavior.
- Students comply with copyright law when reusing content or resources from websites.
- Students are able to correctly cite copyrighted works in their digital portfolios and online work.
- Students describe the impact of unethical and illegal use of technology on individuals and society through the lens of Catholic doctrine.
- Students understand that the standard applies to copyright, permission and fair use (by creating a variety of media products that include an appropriate citation and attribution elements.)

CONTENT STANDARDS IN TECHNOLOGY: Sixth Grade - Eighth Grade

Power Standards in **BOLD**. Performance Examples under each Standard.

DIGITAL CITIZEN - continued

ISTE Standard: 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.

Archdiocese of Portland Standards:

2d. Using knowledge of moral implications, students demonstrate an understanding of what personal data is and how to keep it private and secure. Students see personal data and information as gifts of God and that we are stewards of this information.

Performance Examples:

- Students use secure passwords to protect the privacy of information.
- Students participate in class discussions about online safety.
- Students understand when and when not to click on “pop-ups” and advertisements while using the Internet.
- Students understand that ads pop up on certain sites in an attempt to reach and influence a pre-determined target audience.
- Students understand and can identify online phishing, spam, and malicious emails.
- Students demonstrate knowledge of when to share personal information.
- Students can evaluate online tools (e.g., extensions, apps, software, etc.) to determine their safety, privacy policy, and appropriate use.
- Students discuss concepts such as encryption, HTTPS, password, cookies and computer viruses; they also understand the limitations of data management and how data collection technologies work.

KNOWLEDGE CONSTRUCTOR

ISTE Standard: 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.

Archdiocese of Portland Standards:

3a. Students demonstrate and practice the ability to effectively utilize research strategies to locate appropriate digital resources in support of their learning.

Performance Examples:

- Students use online databases to complete a research project of their choice.
- Students make effective keyword choices when searching online and are able to explain what terms they used to find their information.
- Students are able to use their lived experiences and work to enhance their learning and research strategies and to incorporate content from non-traditional media and resources.

3b. Students practice and demonstrate the ability to evaluate resources for accuracy, perspective, credibility, and relevance.

Performance Examples:

- Students create and publish digital stories online for peer review.
- Students use their knowledge of media literacy and multiple criteria to evaluate the validity of the information found with digital learning tools and resources.
- Students understand that media present value messages and have an inherent bias, and question who produced material, what may have been left out, and how facts were used.
- Students can cite relevant evidence and resources to support or validate accuracy and perspective.

3c. Students locate and collect resources from a variety of sources and organize assets into collections for a wide range of projects and purposes.

Performance Examples:

- Students create a digital collection of resources on an interactive platform to share with others.
- Students create multimedia presentations proposing their solution to a current issue with links or references to supporting resources.

3d. Students explore real-world issues and topics in their community actively pursuing an understanding of them and seeking possible resolutions for them.

Performance Examples:

- Students research a current issue using online resources.
- Students develop digital materials to promote personal or community-related points of view.



CONTENT STANDARDS IN TECHNOLOGY: Sixth Grade - Eighth Grade

Power Standards in **BOLD**. Performance Examples under each Standard.

INOVATIVE DESIGNER - continued

ISTE Standard: 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.

Archdiocese of Portland Standards:

4a. Students engage in a design process and employ it to generate ideas, create innovative products, and/or meet challenges.

Performance Examples:

- Students investigate and illustrate complex ideas or processes using a digital tool to develop their own thinking.
- Students create a digital space to collaborate, innovate, and share ideas.
- Students use digital tools to brainstorm and develop collaborative and collective solutions to a shared problem.

4b. Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

Performance Examples:

- Students identify stages in their design process and match one or more tools to each stage.
- Students use design tools to illustrate a thought or process.
- Students estimate the time needed for different phases of a project and check the accuracy of their predictions at the project's end.
- Students study a design-process framework including tools appropriate to each stage with respect to an assigned project.

4c. Students develop, test, and refine prototypes as part of a cyclical design process.

Performance Examples:

- Students use criteria developed with guidance to evaluate a new or improved product for its functional, aesthetic, and creative elements.
- Students create design prototypes to address personal and/or community challenges.
- Students are able to use online feedback/comments to evaluate the feasibility and practicality of prototypes.
- Students are able to use data collected online to test and evaluate designs.
- Students understand the design process and are able to digitally illustrate design criteria and constraints.

4d. Students demonstrate an ability to persevere and handle greater ambiguity as they work to solve open-ended problems.

Performance Examples:

- Students present solutions to their peers and possibly determine the best solutions.
- Students examine a familiar product or process and suggest improvements to its design.

COMPUTATIONAL THINKER

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

Archdiocese of Portland Standards:

5a. Students practice defining problems to solve by computing for data analysis, modeling, or algorithmic thinking.

Performance Examples:

- Students use a variety of tools to model a process.
- Students practice breaking down complex tasks to make a process manageable and easily communicated.
- Students utilize software and hardware to solve problems.
- Students create simple computational codes to respond to simple commands.
- Students create software that guides system input and output.

5b. Students find or organize data and use technology to analyze and represent it to solve problems and make decisions.

Performance Examples:

- Students gather data, examine patterns, and apply information for decision-making using digital tools and resources.
- Students analyze data collected or retrieved from a variety of digital learning tools and resources to determine if patterns or trends are present.

5c. Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

Performance Examples:

- Students break down a problem into a logical flow.
- Students create a project plan timeline and role descriptions for an upcoming group project.
- Students identify a problem or issue at school or in the community, break it down into component parts, and use technology to create solutions (e.g. using media to illustrate a position on a social cause).

5d. Students demonstrate an understanding of how automation works and use algorithmic thinking to design and automate solutions.

Performance Examples:

- Students create algorithms, or a list of ordered steps, to solve a problem or communicate an idea.
- Students demonstrate an understanding of logical processes and use reasoning (e.g., IF-THEN statements) to infer and compare solutions and draw conclusions in a variety of content areas.

CONTENT STANDARDS IN TECHNOLOGY: Sixth Grade - Eighth Grade

Power Standards in **BOLD**. Examples under each Standard.

CREATIVE COMMUNICATOR

ISTE Standard: 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.

Archdiocese of Portland Standards:

6a. Students select appropriate platforms and tools to create, share and communicate their work effectively.

Performance Examples:

- Students use a variety of tools to communicate their learning effectively.
- Students evaluate the appropriateness of their chosen platform or tools before, during, and after completion, and are able to justify their choice in light of their audience.

6b. Students create original works or responsibly repurpose other digital resources into new creative works.

Performance Examples:

- Students create an audio or visual project from resources found online and are able to correctly cite and give credit to the original creator.
- Students reflect on their sources of inspiration for original work, even if not quoted directly.
- Students understand how to attribute the material to a digital product.

6c. Students communicate complex ideas clearly using various digital tools to convey the concepts textually, visually, graphically, etc.

Performance Examples:

- Students integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
- Students communicate complex processes and illustrate their thinking using digital tools.
- Students analyze and present data tables and charts to their peers, explaining the significance of each element.
- Students use tools to create a data visualization that is easily understood by their peers and others.

6d. Students publish or present content that customizes the message and medium for their intended audiences.

Performance Examples:

- Students evaluate the effectiveness of a digital tool to communicate information with multiple audiences.
- Students share what is learned about a topic, problem, or question with multiple audiences.
- Students use digital tools to document personal learning experiences and receive feedback from peers.

GLOBAL COLLABORATOR

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

Archdiocese of Portland Standards:

7a. Students use digital tools to interact with others to develop a richer understanding of different perspectives and cultures.

Performance Examples:

- Students utilize online databases to search for information on cultures other than their own and consider the biases of each source.
- Students interview community members and edit interviews into media presentations to be shared with the community.

7b. Students use collaborative technologies to connect with others, including peers, experts, and community members, to learn about issues and problems or to gain a broader perspective.

Performance Examples:

- Students collaborate in an online platform with a variety of peers, experts, and community members.
- Students participate in online discussions moderated and assessed by their teacher.

7c. Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

Performance Examples:

- Students serve different roles in collaborative projects to determine strengths and weaknesses.
- Students use a digital project management tool to track team performance on assigned tasks.
- Students plan a project using online tools (e.g. assign group roles and establish timelines using an online calendar).

7d. Students select collaborative technologies and use them to work with others to investigate and develop solutions related to local and global issues.

Performance Examples:

- Students digitally collect and analyze survey data from their communities.
- Students create digital products to demonstrate understanding and analysis of global issues.
- Students initiate online shared documents and lay ground rules for how to develop them.
- Students collaborate together digitally to present their learning and solutions.

ASSISTIVE TECHNOLOGY

Explore the following websites for information about specific technologies and guidance on finding appropriate tools.
Source: <https://www.edutopia.org/article/assistive-technology-resources>

Assistive Technology Module

- IRIS Center/Vanderbilt University
- <https://iris.peabody.vanderbilt.edu/module/at/>
- To review the basics, check out this great overview of assistive technology for classroom teachers.

Accessibility

- National Center on Accessible Educational Materials
- <https://aem.cast.org/get-started/defining-accessibility>
- Find general information on assistive technology and accessible educational materials, including relevant federal laws. Assistive Technology Resources is a comprehensive list of national organizations, conferences, state resources, and transition resources.

Determining Accessible Formats

- National Center on Accessible Educational Materials
- <https://aem.cast.org/acquire/decision-making-accessible-formats#.VifxQaQ7TrY>
- Explore a decision-making tool -- designed for use by Individualized Education Program teams -- that can help determine the need, selection, acquisition, and use of accessible educational materials.

TechMatrix

- U.S Department of Education/American Institutes for Research
- <https://techmatrix.org/>
- Search a database of over 400 assistive and educational technology tools and resources. The products are searchable by content area, grade level, IDEA disability category, and type of instructional support.

TIPS AND TOOLS

Social-Emotional Apps for Special Ed

<https://www.edutopia.org/blog/social-emotional-apps-special-ed-jayne-clare>

Find apps to help students of all ages build emotional literacy, learn self-regulation, and focus on problem-solving and task planning (Edutopia, 2015).

Apps to Support Diverse Learners in the Classroom

<https://www.edutopia.org/blog/apps-support-diverse-learners-classroom-chester-goad>

Find apps to help diverse learners gamify tasks, learn social cues, prioritize, strengthen math skills, and sharpen language abilities (Edutopia, 2015).

It's a Snap! 4 Ways to Use Music With Special Needs Students

<https://www.edutopia.org/blog/music-with-special-needs-students-michelle-lazar>

Discover ways to supplement visuals with music, teach through students' favorite songs, emphasize rhythm, and generalize lessons into non-musical settings (Edutopia, 2014).

Creating a "Least Restrictive Environment" with Mobile Devices

<https://www.edutopia.org/blog/least-restrictive-environment-mobile-devices-beth-holland>

See how mobile devices can help create a "least restrictive environment," not only for students with disabilities but for everyone else as well (Edutopia, 2013).

Dictation Technology Will Change Writing Instruction

<https://www.edutopia.org/blog/dictation-technology-changing-writing-instruction-robert-rosenberger>

Consider this thoughtful examination of how dictation technology is likely to change the future of writing instruction (Edutopia, 2013).

TECHNOLOGY RESOURCES TO ADDRESS SPECIFIC CHALLENGES

Source: <https://www.edutopia.org>

Year-Round Resources for Autism

<https://www.edutopia.org/blog/year-round-resources-for-autism-jayne-clare>

Explore resources like autism superheroes and "talking" Bluetooth-enabled stuffed animals to help children on the autism spectrum understand their differences and communicate with others (Edutopia, 2016).

School-as-Studio Immerses Students in Creative Problem Solving

<https://www.edutopia.org/blog/school-studio-immerses-students-creative-problem-solving-suzie-boss>

Read about a "hack your wheelchair" studio whereby a student worked together with teammates to make his wheelchair easier to propel and better equipped for wet weather (Edutopia, 2015).

Dyslexia in the General Education Classroom

<https://www.edutopia.org/blog/dyslexia-in-general-ed-classroom-kelli-sandman-hurley>

Take a look at a list of common and helpful accommodations for students with dyslexia, including assistive-technology tools (Edutopia, 2014).

Technology-Rich Literacy Experience for Students With Reading Disabilities

<https://www.edutopia.org/blog/udio-tech-platform-reading-disabilities-ted-hasselbring>

Learn about Udio, an online environment designed to engage and support middle school students who face literacy challenges (Edutopia, 2014).

Design Challenge

<https://www.edutopia.org/blog/design-diy-assistive-game-controllers-matthew-farber>

DIY Assistive Game Controllers: Discover four of many possible ways for transforming standard video games into assistive-technology tools that students of any ability can enjoy (Edutopia, 2014).

Assistive Technology and the 1:1 Student

<https://www.edutopia.org/blog/assistive-technology-one-to-one-andrew-marcinek>

In a story about Burlington High's 1:1 program, see how an iPad was used to assist one student with her visual impairment (Edutopia, 2012).

UNIVERSAL DESIGN FOR LEARNING (UDL)

What is UDL?

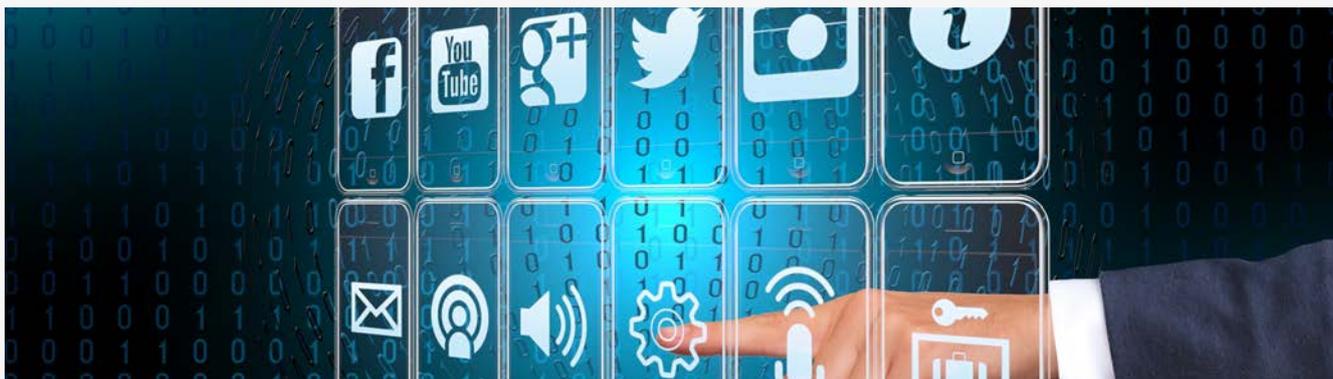
- National Center of Universal Design for Learning
- <https://www.cast.org/impact/universal-design-for-learning-udl>
- Understand the basics of universal design for learning. National Center of Universal Design for Learning

UDL and Technology

- National Center of Universal Design for Learning
- <https://www.cast.org/publications/2012/udl-unplugged-role-technology>
- Read about the relationship between UDL and technology. UDL strategies do not replace the need for AT, but UDL and AT can be complementary.

Universal Design for Learning: What It Is and How It Works

- Understood.org
- <https://www.understood.org/>
- Explore key takeaways for parents, including information about advocating for children.



FIVE COMPETENCIES OF DIGITAL CITIZENSHIP

Source: <https://www.iste.org/explore/5-competencies-digital-citizenship>

INCLUSIVE

I am open to hearing and respectfully recognizing multiple viewpoints, and I engage with others online with respect and empathy.

INFORMED

I evaluate the accuracy, perspective, and validity of digital media and social posts.

ENGAGED

I use technology and digital channels for civic engagement, to solve problems, and be a force for good in both physical and virtual communities.

BALANCED

I make informed decisions about how to prioritize my time and activities online and off.

ALERT

I am aware of my online actions and know-how to be safe and create safe spaces for others online.

COPYRIGHT

Guidelines

As most teachers probably know, copyright law covers many of the things teachers use to educate students, from textbooks to music to artwork, plays, and movies. Because the digital environment poses unique challenges for copyright, particularly the ease with which digital material can be copied and distributed, the law imposes a number of requirements on Distance Learning that do not apply to face-to-face teaching. The TEACH Act, sections 110(2) and 112(f), designed specifically to deal with online Distance Learning (Gormley, 2020). More information is available at www.copyright.gov.

Open Educational Resources (OER)

One place to look for complementary resources is to search for Open Educational Resources (OER). An image, eBook, podcast, video, fully-developed online course (e.g. EdReady.org), or interactive learning activity could all be considered Open Educational Resources. Officially, Open Educational Resources are licensed very openly through a Creative Commons license; teachers can use them either as-is or adapt them to better suit their learners. Because they are free and often adaptable, they are ideal supplemental resources for either blended or fully distance instruction.