

# DIOCESAN OF MERIE STUDENT STANDARDS

## **1 Empowered Learner**

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

### **1a**

Students articulate and set personal learning goals (Age appropriate opportunities for students to have a say in their learning goals and make choices on how to meet them.) **develop strategies leveraging technology to achieve them and reflect on the learning process** (Recognize and evaluate the steps taken to meet learning goals – What worked? Why did things unfold as they did? What could be approached differently? What will you do differently in the future?) **itself to improve learning outcomes.**

### **1b**

Students build networks (Enrich learning by making online connections with other learners and experts for personal or academic interests, for example, via social media, connecting through email, video conferencing, digital pen pals, etc.) and customize (Choosing and making changes to meet Universal Design for Learning, and accessibility, for example, by using audio, video, dynamic glossaries, highlighting, note taking, voice command, text to speech, social bookmarking, and cloud collaboration tools.) their learning environments (Local, physical and online environments, both formal and informal.) in ways that support the learning process.

### **1c**

Students use technology (Seek digital or human feedback, for example, spell-check and grammar-check tools, online search, and learning analytics programs that measure how time is spent on a problem or identify specific challenge areas, collaborative spaces that allow others to give feedback, reaching out to experts for input.) to **seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.** (Create artifacts to show how students have met their learning goals, for example, digital posters, blogs, digital stories, assessments, e-portfolios, project showcase, research paper and works of art.)

### **1d**

Students understand the fundamental concepts of technology operations, (Basic knowledge of how to use devices and software applications.) **demonstrate the ability to choose, use and troubleshoot** (Able to solve technical problems, for example, restart a device, install software updates, transfer work from one device to another and troubleshoot when audio/video won't play.) **current technologies and are able to transfer** (Apply prior technical knowledge and experiences to figure out how new technologies or applications work.), **their knowledge to explore emerging technologies.** (New digital tools and technologies that have potential to enhance the learning process.)

# Digital Citizen

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

## **2a**

Students cultivate and manage their digital identity (How an individual is represented online in the public domain, based on activities, connections or tagging, for example, social media posts, photos, public online comments/reviews, awareness and monitoring of how others are depicting you online.), and reputation and are aware of the permanence (Digital content is everlasting, even when individuals delete it or believe privacy setting fully protect them from scrutiny.), of their actions in the digital world.

## **2b**

Students engage in positive, (Interactions that convey a portrait of the way you want to be perceived and healthy interactions with technology itself, for example, moderating the time online or gaming, ergonomic issues and balancing use of media with daily physical activity.), safe, (Interactions that keep you out of harm's way, for example, knowing the identity of who you are interacting with; how much and what kind of information you release online; protecting oneself from scams, phishing schemes and poor purchasing practices (e-commerce theft).), legal (Interactions that are mindful of the law, for example, abiding by copyright and fair use, respecting network protections by not hacking them and not using another's identity.), and ethical (Interactions that align with one's moral code, for example, preventing or not engaging in cyberbullying, trolling or scamming; avoiding plagiarism; supporting others' positive digital identity.), behavior when using technology, including social interactions online or when using networked devices.

## **2c**

Students demonstrate an understanding of and respect for the rights and obligations of using and sharing, (Abiding by copyright and fair use, citing resources, gaining or giving permission to use content, avoiding plagiarism, understanding and using creative commons.), intellectual property. (Content or ideas created by an individual or entity, for example, music, photos, narration, text and designs.)

## **2d**

Students manage their personal data, (For example, creating effective passwords, authenticating sources before providing personal information, sharing personal data conscientiously, not posting address or phone numbers visibly.), to maintain digital privacy and security, (For example, activate privacy settings on social media accounts and search engines, recognize sites that use encryption, secure login and password information on shared devices, read and be conscientious about accepting privacy policies and access requests from apps and websites.), and are aware of data-collection technology (Entities that track an individual's personal data when using networked devices, for example, website cookies, search algorithms return results based on past searches, website analytics, GPS on cell phones, the "Internet of Things" where data is exchanged between networked devices and objects.), used to track their navigation online.

## Knowledge Constructor

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

### **3a**

Students plan and employ effective research strategies, (For example, using multiple sources (digital, online, print, etc.), using library databases and catalogues, using advanced tools and criteria for online searches, using online bookmarking tools, using online note-taking tools.), to locate information and other resources (For example, research or other data, digital assets and media such as photos, clip art, videos, and audio clips.) for their intellectual or creative pursuits.

### **3b**

Students evaluate the accuracy, (When was resource last updated or copyrighted (i.e., is it current?) sources of information; links to other valid sources; factual correctness; URL cross-checked on databases; use of .com, .org, .edu, etc.), perspective, (Who is the resource trying to reach? What is its tone and mission? Does it show indications of problematic bias?), credibility (Who wrote/published the resource and what are their credentials? How objective is the author and how reliable is the publication source? For clues, look at the domain name, affiliations, mission and vision.), and relevance (Does the source meet your needs? Does it have the information you are looking for?), of information, media, data or other resources.

### **3c**

Students' curate (To gather, select and categorize resources into themes in ways that are coherent and shareable.), information from digital resources using a variety of tools, (For example, note taking, outlining, citation and annotation tools, aggregating apps/platforms.), and methods to create collections of artifacts, (For example, portfolio, multimedia presentation, paper, project, video, demonstration, etc.), that demonstrate meaningful connections or conclusions. (Learning that reflects a theme, proves a thesis or builds knowledge around an authentic topic.)

### **3d**

Students build knowledge, (Construct and expand understanding and perspective on a topic or idea.), by actively exploring, (Open-ended, student-driven inquiry.), real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

## Innovative Designer

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

### **4a**

Students know and use a deliberate design process (A methodology for problem-solving; a series of steps used to solve a problem and design a solution. For example, human-centered design process, project-based learning, engineering design processes, scientific method.), for generating ideas, testing theories, creating innovative artifacts, (Artifacts created by new methods, original thinking or improvements to an existing artifact. For example, 3D printed artifacts, computer programs, robotics, simulations, virtual representations, prototypes, etc.), or solving authentic, (Real-world problems, for example, design challenges, science explorations, philosophical questions, service learning projects, social issues, (recycling, composting, pollution, hunger poverty.) problems.

### **4b**

Students select and use digital tools (For example, brainstorming tools, flow charts, drawing or mark-up tools, 3D design software, note-taking tools, and project-management tools.), to plan and manage a design process that considers design constraints (For example, time, money, expertise, materials, conditions and potential obstacles.), and calculated risks. (For example, time, money, expertise, materials, conditions and potential obstacles.)

### **4c**

Students develop, test and refine prototypes (A first or preliminary model of something from which other versions are developed or copies.), as part of a cyclical (A first or preliminary model of something from which other versions are developed or copies.), design process.

### **4d**

Students exhibit a tolerance for ambiguity, (Comfort with the unknown or uncertainty.), perseverance (Continued effort in the face of obstacles and/or uncertain outcomes.) and the capacity to work with open-ended problems. (Problems that have many or undefined solutions.)

## Computational Thinker

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

### **5a**

Students formulate problem (Create and articulate a precise and thorough description of a problem designed to facilitate its solution, including conditions and constraints that must be taken into account.) definitions suited for technology-assisted (Methods that benefit from the application of technology and make something easier, more efficient, effective or powerful; computing.) methods such as data analysis, abstract models (Representation of a relationship, concept or structure.) and algorithmic thinking (The ability to develop precise instructions or sequences that form the basis for algorithms.) in exploring and finding solutions.

### **5b**

Students collect data (For example, surveys, online data sets, physical measurements.) or identify (Could be big data, public access information, or private databases, for example, population or global deed source databases, public data streams from weather satellites.) relevant data sets, use digital tools to analyze (Making sense of data, identifying patterns and drawing conclusions, for example, using databases, visualizations tools, analytics, mapping software, text-analysis software.) them, and represent (Depicting and organizing data in appropriate graphs, charts, words or images.) data in various ways to facilitate problem-solving and decision-making.

### **5c**

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

### **5d**

Students understand how automation (Having computers or machines do repetitive or tedious tasks.) works and use algorithmic thinking to develop a sequence (A series of ordered steps taken to solve a problem or achieve some end; an algorithm, for example, as part of computer programming, including coding.) of steps to create and test automated (A computer-aided solution that completes a task.) solutions.

## Creative Communicator

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

### **6a**

Students choose the appropriate platforms (Mode of delivery, for example a blog, video, slide deck presentation, digital poster, social media site, podcast, website or other online tool.) and tools (For example, digital camera or video, audio software, graphic design software, writing software.), for meeting the desired objectives of their creation or communication.

### **6b**

Students create original works or responsibly repurpose (Changing the way something was originally used or combining original assets in a unique way and, as needed, seeking permission to use content from the author/creator and using proper attributions.), or remix digital resources into new creations.

### **6c**

Students communicate complex ideas (Deconstruct information and/or data and synthesize so it is more simply conveyed to increase understanding. For example, use of metaphors, compare/contrast, categorization.), clearly and effectively by creating or using a variety of digital objects (Any product, asset or artifact that is digital.) such as visualizations, (For example, infographics, word clouds, interactive charts and graphs.), models, (For example, concept maps, mind maps, flowcharts and prototypes.), or simulations. (Representation or imitation of systems or situations that are not easily subject to experimentation or not readily accessible.)

### **6d**

Students publish or present content that customizes (Identify both message (content) and medium (mode of delivery) to successfully convey ideas or creations to various audiences, for example, peers, parents and community members.) the message and medium for their intended audiences.

## **Global Collaborator**

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

### **7a**

Students use digital tools (Use tools, such as video conferencing, chats, visual field trips, multi-player online games, email and social media, to connect with other students from around the world.) to connect with learners from a variety of backgrounds and cultures, engaging (Connected global learners know how to respectfully reach out and work with others from different cultures to meet specific learning objectives, for example, engaging with digital pen pals, tele-collaborative global projects, social action projects, translation software/apps, synchronous/asynchronous collaborative platforms, open educational resources and school global partnerships.) with them in ways that broaden mutual understanding and learning.

### **7b**

Students use collaborative technologies (Applications that facilitate teamwork and collaboration between students and experts around the globe, for example, knowledge sharing tools, video conferencing, digital project spaces/sites, chats, collaborative schedulers.) to work with others, including peers, experts or community members, to examine (Engage in conversations and debate through the lens of different cultural, geographic, demographic and personal perspectives, such as online debates, discussion forums, tele-mentoring and personal learning networks.) issues and problems from multiple viewpoints.

### **7c**

Students contribute constructively (Facilitate or engage in collegial feedback, manage timelines and scope of project, engage team decision making, contribute in ways that are measurable.) to project teams, assuming various roles (Practice communication skills by experiencing different roles, for example, team lead, subject-matter expert, beta tester, timekeeper, note taker or scheduler.) and responsibilities to work effectively toward a common goal.

### **7d**

Students explore local and global issues (Examples include virtual field trips, research projects, e-pals, and action projects using digital tools.) and use collaborative technologies to work with others to investigate solutions. (The ability to address and potentially solve significant problems in students' communities and around the world, both independently and in collaboration with others.)