Technology Learning Outcomes

The Technology Learning Outcomes that have been adopted by the Diocese of Fall River are taken from the National Educational Technology Standards, which are published by the International Society of Technology in Education. The NETS address six topic areas:

1.   Creativity and Innovation

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

   a) apply existing knowledge to generate new ideas, products, or processes.
   b) create original works as a means of personal or group expression.
   c) use models and simulations to explore complex systems and issues.
   d) identify trends and forecast possibilities.

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. Students:

   a) interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
   b) communicate information and ideas effectively to multiple audiences using a variety of media and formats.
   c) develop cultural understanding and global awareness by engaging with learners of other cultures.
   d) 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. Students:

   a) plan strategies to guide inquiry.
   b) locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
   c) evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
   d) 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. Students:

a) identify and define authentic problems and significant questions for investigation.
b) plan and manage activities to develop a solution or complete a project.
c) collect and analyze data to identify solutions and/or make informed decisions.
d) 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. Students:

a) advocate and practice safe, legal, and responsible use of information and technology.
b) exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
c) demonstrate personal responsibility for lifelong learning.
d) exhibit leadership for digital citizenship.

6. Technology Operations and Concepts

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

a) understand and use technology systems.
b) select and use applications effectively and productively.
c) troubleshoot systems and applications.
d) transfer current knowledge to learning of new technologies.

The technology learning outcomes listed below should not be taught in isolation, they should be fully integrated into the content area curriculum to support learning. For more information, teachers are encouraged to visit http://www.iste.org.

Grades K-2

1. Use input devices (e.g., mouse, keyboard, remote control) and output devices (e.g., monitor, printer) to successfully operate computers, VCRs, audiotapes, and other technologies.
2. Use a variety of media and technology resources for directed and independent learning activities.
3. Communicate about technology using developmentally appropriate and accurate terminology.
4. Use developmentally appropriate multimedia resources to support learning.
5. Work cooperatively and collaboratively with peers, family members, and others when using technology in the classroom.
6. Demonstrate positive social and ethical behaviors when using technology in accordance with teachings of the Catholic Church.
7. Practice responsible use of technology systems and software.
8. Create developmentally appropriate multimedia products with support from teachers, family members, or student partners.
9. Use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories.
10. Gather information and communicate with others using telecommunications, with support from teachers, family members, or student partners.

Grades 3-5

1. Use keyboards and other common input and output devices (including adaptive devices when necessary) efficiently and effectively.
2. Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide.
3. Discuss basic issues related to responsible, moral and ethical use of technology and information and describe personal consequences of inappropriate use in accordance with teachings of the Catholic Church.
4. Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum.
5. Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom.
6. Use telecommunications morally, efficiently and in accordance with the teachings of the Catholic Church to access remote information, communicate with others in support of direct and independent learning, and pursue personal interests.
7. Use telecommunications and online resources to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom.

8. Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem solving, self-directed learning, and extended learning activities.
9. Determine which technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.
10. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources.

Grades 6-8

1. Apply strategies for identifying and solving routine hardware and software problems that occur during everyday use.
2. Demonstrate knowledge of current changes in information technologies and the effect those changes have on the workplace and society.
3. Exhibit Catholic, moral, legal and ethical behaviors when using information and technology, and discuss consequences of misuse.
4. Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems.
5. Use content-specific tools, software, and simulations to support learning and research.
6. Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum.
7. Design, develop, publish, and present products using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom.
8. Collaborate with peers, experts, and others using telecommunications and collaborative tools to investigate curriculum-related problems, issues, and information, and to develop solutions or products for audiences inside and outside the classroom.
9. Demonstrate an understanding of concepts underlying hardware, software, and connectivity, and of practical applications to learning and problem solving.
10. Research and evaluate the accuracy, relevance, appropriateness within the Catholic context, comprehensiveness, and bias of electronic information sources concerning real-world problems.

Grades 9-12

1. Identify capabilities and limitations of contemporary and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs.
2. Make informed choices among technology systems, resources, and services.
3. Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole.
4. Demonstrate and advocate for Catholic, moral, legal, and ethical behaviors among peers, family, and community regarding the use of technology and information.

5. Use technology tools and resources for managing and communicating personal/professional information (e.g., finances, schedules, addresses, purchases, correspondence).
6. Evaluate technology-based options, including distance and distributed education, for lifelong learning.
7. Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity.
8. Select and apply technology tools for research, information analysis, problem-solving, and decision-making in content learning.
9. Investigate and apply expert systems, intelligent agents, and simulations in real-world situations.
10. Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce, and disseminate information, models, and other creative works.