ISTE Technology Standards

Basic operations and concepts

1. Students demonstrate a sound understanding of the nature and operation of technology systems

2. Students are proficient in the use of technology

Pre-K-2 Targets	a. 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 b. Use a variety of media and technology resources for directed and independent learning activities c. Communicate about technology using developmentally appropriate and accurate terminology d. Use developmentally appropriate multimedia resources (e.g., interactive books, educational software, elementary multimedia encyclopedias) to support learning
3-5 Targets	a. Use keyboards and other common input and output devices (including adaptive devices when necessary) efficiently and effectively b. Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide
6-8 Targets	a. Apply strategies for identifying and solving routine hardware and software problems that occur during everyday use b. Demonstrate an understanding of concepts underlying hardware, software, and connectivity, and of practical applications to learning and solving
9-12 Targets	a. Make informed choices among technology systems, resources, and services

Social, ethical, and human issues

3. Students understand the ethical, cultural, and societal issues related to technology

4. Students practice responsible use of technology systems, information, and software

5. Students develop positive attitudes toward technology uses that support lifelong leaning, collaboration, personal pursuits, and productivity

Pre-K-2 Targets	a. Work cooperatively and collaboratively with peers, family members, and others when using technology in the classroom b. Demonstrate positive social and ethic behaviors when using technology c. Practice responsible use of technology systems and software
3-5 Targets	a. Discuss common uses of technology in everyday life and the advantages and disadvantages those uses provide b. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use
6-8 Targets	a. Demonstrate knowledge of current changes in information technologies and the effect those changes have on the workplace and society b. Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse c. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems
9-12 Targets	a. Identify capabilities and limitations of contemporary and emerging technology resources and asses the potential of these systems and services address personal, lifelong learning, workplace needs b. Make informed choices among technology systems, resources, and services c. Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole d. Demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information

Technology productivity tools

6. Students use technology tools to enhance learning, increase productivity, and promote creativity

7. Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works

Pre-K-2 Targets	a. Use a variety of media and technology resources for directed and independent learning activities b. Create developmentally appropriate multimedia products with support from teachers, family members, or student partners c. 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
3-5 Targets	a. Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum b. 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
6-8 Targets	a. Use content-specific tools, software, and simulations (e.g., environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research b. Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum
9-12 Targets	a. Use technology tools and resources for managing and communicating personal/professional information (e.g., finances, schedules, addresses, purchases, correspondence) b. Investigate and apply expert systems, intelligent agents, and simulations in real-world situations

Technology communications tools

8. Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences

9. Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences

Pre-K-2 Targets	a. 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 b. Gather information and communicate with others using telecommunications, with support from teachers, family members, or student partners
3-5 Targets	a. 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 b. Use telecommunications efficiently to access remote information, communicate with others in support of direct and independent learning, and pursue personal interests c. Use telecommunications and online resources (e.g., e-mail, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom
6-8 Targets	a. Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate concepts to audiences inside and outside the classroom b. 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 or outside the classroom
9-12 Targets	a. Use technology tools and resources for managing and communicating personal/professional information (e.g., finances, schedules, addresses, purchases, correspondence) b. Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity

c. Select and apply technology tools for research, information analysis, problem-solving, and decision-making in content learning
d. 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

Technology research tools

10. Students use technology to locate, evaluate, and collect information for a variety of sources

11. Students use technology tools to process data and report results

12. Students evaluate ad select new information resources and technological innovations based on the appropriateness for specific tasks

Pre-K-2 Targets

a. 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

3-5 Targets

a. Use telecommunications and online resources (e.g., e-mail, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom
b. Use technology resources (e.g. calculators, data collection probes, videos, educational software) for problem solving, self-directed learning, and extended learning activities
c. Determine which technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems

6-8 Targets

a. Use content-specific tools, software, and simulations (e.g., environmental probes, graphing calculators, exploratory environments Web tools) to support learning and research
b. Design, develop, publish, and present products (e.g., Web pages, Videotapes) Using technology resources that demonstrate and communicate concepts to audiences inside and outside the classroom

c. 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
d. Select and use appropriate tools and technology resources to accomplish a variety of task and solve problems
e. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems

9-12 Targets

a. Evaluate technology-based options, including distance and distributed education, for lifelong learning
b. Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity
c. Select and apply technology tools for research, information analysis, problem-solving, and decision-making in content learning
d. Investigate and apply expert systems, intelligent agents, and simulations in real-world situations
e. 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

Technology problem-solving and decision-making tools

13. Students use technology resources for solving problems and making informed decisions

14. Students employ technology in the development of strategies for solving problems in the real world

Pre-K-2 Targets

a. 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

3-5 Targets

a. Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem solving, self-directed learning, and extended learning activities

learning activities

b. Determine which technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems
c. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources

6-8 Targets

a. Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum
b. Design, develop, publish, and resent products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate concepts to audiences inside and outside the classroom
c. Select and use appropriate tools and technology resources to accomplish a variety do tasks and solve problems
d. Demonstrate an understanding of concepts underlying hardware, software, and connectivity, and of practical applications to learning and solving
e. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems

9-12 Targets

a. Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity
b. Investigate and apply expert systems, intelligent agents, and simulations in real-world situations
c. 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