

Networking

- A** - Awareness Level
- G** - Guided Level
- I** - Independent Level
- M** - Mastered
- O** - Optional

Standards and Core Competencies

Standards:

1. Basic Operations and Concepts
 - Students demonstrate a sound understanding of the nature and operation of technology systems.
 - Students are proficient in the use of technology.

6. Technology Problem-Solving and Decision-Making Tools
 - Students use technology resources for solving problems and making informed decisions.
 - Students employ technology in the development of strategies for solving problems in the real world.

Core Competencies:

1. Apply strategies for identifying and solving routine hardware and software problems that occur during everyday use.

9. Demonstrate an understanding of concepts underlying hardware, software, and connectivity, and of practical applications to learning and problem solving.

Knowledge and Skills		K	1	2	3	4	5	6	7	8	9	10	11	12
A	Understand and agree to the district's <u>Acceptable Use Policy</u> and ethics.	G	G	G	G	G	G	G	G	G	G	G	G	G
B	Select networked printer.	A	A	A	G	G	I							
C	Select, log on/log off, open, close and save files to a pre-selected server.	A	A	G	G	I	i							
D	Explain the uses of and the means by which computers are networked.		A	A	A	A	G	G	I					
E	Troubleshoot cabling, network software, interface devices, connectivity (boxes, hubs).						O	O	O	O	O	O	O	O

Web Authoring

- A** - Awareness Level
- G** - Guided Level
- I** - Independent Level
- M** - Mastered
- O** - Optional

Standards and Core Competencies

Standards:

4. Technology Communication Tools

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

5. Technology Research Tools

- Students use technology to locate, evaluate, and collect information from variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technology innovations based on the appropriateness to specific tasks.

6. Technology Problem-Solving and Decision-Making Tools

- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

Core Competencies:

6. Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate curriculum concepts to audiences inside and outside the classroom.

Knowledge and Skills		K	1	2	3	4	5	6	7	8	9	10	11	12
A	Understand and agree to the district's <u>Acceptable Use Policy</u> and ethics.	G	G	G	G	G	G	G	G	G	G	G	G	G
B	Understanding that web sites on the Internet are created with web-authoring tools that are displayed in a web browser.	A	G	I	I	I								
C	Use help menu as a method for problem solving.	A	A	G	G	I								
D	Use pre-made templates.	A	A	G	G	I								
E	Identify the software and hardware needed to publish web pages.				A	G	G	G	I					
F	Use web authoring software to create a simple web					A	G	I	I					

Digital Literacy (Video and Digital Images)	A - Awareness Level G - Guided Level I - Independent Level M - Mastered O - Optional
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STANDARDS AND CORE COMPETENCIES

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- Students use technology to locate, evaluate, and collect information from variety of sources.
- Students use technology tools to process data and report results.
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Core Competencies:

6. Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate an communicate curriculum concepts to audiences inside and outside the classroom.

Knowledge and Skills		K	1	2	3	4	5	6	7	8	9	10	11	12
A	Use critical viewing skills.	G	G	G	G	G	G	G	I	I	I	I	I	
B	Operate a DVD/VCR combo (play, record, fast forward, rewind, pause).	G	I											
C	Operate a video camera: turn it on/off, zoom, use camera angles.	A	G	I	I									
D	Operate a digital still camera: turn on/off, zoom, and flash operation.	A	G	I	I									

E	Navigate through a multimedia presentation	I	I	I	I	■													
F	Use basic microphone techniques.	A	G	I	I	■													
G	Use help menu as a method for problem solving.	A	A	G	G	I	■												
H	Brainstorm and plan video organization and content: treatment (proposal), story-boarding, scripting, production schedule.	G	G	G	G	I	I	I	I	■									
I	Use production skills (e.g., camera shots/ movements, composition, lighting, microphone use and placement, video recording, directing).	G	G	G	G	I	I	I	I	■									
J	Use basic computer based photo editing applications (crop, resize, and reduce red-eye)	G	G	G	G	I	I	I	I	■									
K	Use basic computer based video editing applicaitons. (Add/edit video and still picture for time and content and add titles, transitions, effects, music and voice over to videos)	G	G	G	G	I	I	I	I	■									
L	Export photos and video in appropriate format and size for intended audience and application use.			A	G	G	G	I	I	■									
M	Import different file formats (graphics, sounds video, etc.) from video camera, still camera, and disk drives.	G	G	G	G	I	I	I	I	■									
N	Burn a movie to CD-ROM.		A	A	G	G	I	I	I	■									
O	Create and burn a movie onto a DVD with chapters, introductory photos/video and music.		A	A	G	G	G	I	I	I	■								
P	Plan, organize and save multimedia files.					A	G	G	G	I	I	I	■						
Q	Direct a multi-camera production: Studio and EFP (Electronic Field Production).					A	G	G	G	I	I	I	■						
R	Use music software to import digital music for video production purposes.		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
S	Use advanced editing systems (e.g., Final Cut Express, Final Cut Pro, Avid)		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
T	Create advanced animation (2-D, 3-D, stop motion).		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O

Web Research

- A** - Awareness Level
- G** - Guided Level
- I** - Independent Level
- M** - Mastered
- O** - Optional

Standards and Core Competencies

Standards:

2. Social, Ethical, and Human Issues

- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

4. Technology Communication Tools

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

5. Technology Research Tools

- Students use technology to locate, evaluate, and collect information from variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technology innovations based on the appropriateness to specific tasks.

6. Technology Problem-Solving and Decision-Making Tools

- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

Core Competencies:

10. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems.

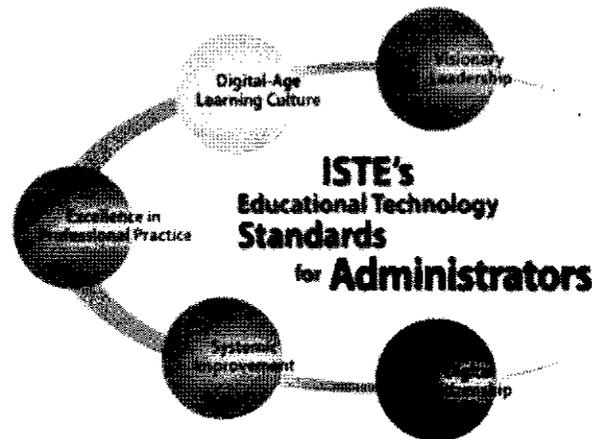
6. Design, develop, publish, and present products (e.g., Web pages, videotapes) using technology resources that demonstrate and communicate curriculum concepts to audiences

inside and outside the classroom.

7. Collaborate with peers, experts, and others using telecommunications and collaborative tools to investigate curriculum-related problems, issues, and information, and to develop solution or products for audiences inside and outside the classroom.

Knowledge and Skills		K	1	2	3	4	5	6	7	8	9	10	11	12
A	Understand and agree to the district's <u>Acceptable Use Policy</u> and ethics.	G	G	G	G	G	G	G	G	G	G	G	G	G
B	Use browser application tools to navigate web pages and sites.	G	G	I	I									
C	Use nonlinear text features incorporated in web pages (e.g. frames, hyperlinks and pop-up windows) to read for information.	G	G	I	I									
D	Use natural language search techniques for research on the Internet.	A	G	G	I	I								
E	Use bookmarking systems for gathering and retrieving web URLs specific to information needed and for citing sources.	A	G	G	I	I								
F	Use find and sort in an online database to locate information.	A	G	G	I	I								
G	Construct key words from <u>research questions</u> to search for information using <u>subject directories</u> (e.g. Yahoo!igans).	A	G	G	G	G	I	I	I					
H	Construct key words from research questions and combine with search techniques (e.g. lower case, "quotes", +, -, *wildcard, link:, title:) using <u>search engines</u> (e.g. Alta Vista).		A	A	G	G	G	I	I					
I	Know when to use a directory, engine or specialized directory to accomplish a searching task.		A	A	G	G	G	I	I					
J	Use bookmarking systems for gathering and retrieving web URLs specific to information needed and for citing sources.		A	A	G	G	G	I	I					
K	Download and store web pdf., audio, video and graphic files specific to information needed and for <u>citing sources</u> .	A	A	G	G	G	I	I	I					
L	<u>Evaluate</u> the reliability and <u>validity</u> of web pages, sites and multimedia files gathered.			A	G	G	G	I	I					
M	Organize information from multiple sources through note taking, outlining and graphic organizers. <u>Cite sources of gathered information</u> .			A	G	G	G	I	I					
N	Synthesize information from multiple sources in an authentic product or presentation in order to <u>give evidence of new understanding</u> .			A	G	G	G	I	I					
	Use telecommunication and collaboration tools to gather information, data and feedback on content related projects.			A	A	G	G	I	I					

O	Use <u>specialized search directories</u> (e.g. newspapers, government, science)		A	A	G	G	G	I	I	I		
P	Construct key words from research questions and combine with Boolean queries (AND, OR, AND NOT, NEAR) using search engines (e.g. Alta Vista, Excite) in <u>advanced searches</u> .						A	A	A	G	G	I



The ISTE National Educational Technology Standards (NETS•A) and Performance Indicators for Administrators

1. Visionary Leadership.

Educational Administrators inspire and lead development and implementation of a shared vision for comprehensive integration of technology to promote excellence and support transformation throughout the organization.

Educational Administrators:

- a. inspire and facilitate among all stakeholders a shared vision of purposeful change that maximizes use of digital-age resources to meet and exceed learning goals, support effective instructional practice, and maximize performance of district and school leaders
- b. engage in an ongoing process to develop, implement, and communicate technology-infused strategic plans aligned with a shared vision
- c. advocate on local, state, and national levels for policies, programs, and funding to support implementation of a technology-infused vision and strategic plan

2. Digital-Age Learning Culture.

Educational Administrators create, promote, and sustain a dynamic, digital-age learning culture that provides a rigorous, relevant, and engaging education for all students.

Educational Administrators:

- a. ensure instructional innovation focused on continuous improvement of digital-age

- learning
- b. model and promote the frequent and effective use of technology for learning
- c. provide learner-centered environments equipped with technology and learning resources to meet the individual, diverse needs of all learners
- d. ensure effective practice in the study of technology and its infusion across the curriculum
- e. promote and participate in local, national, and global learning communities that stimulate innovation, creativity, and digital-age collaboration

3. Excellence in Professional Practice.

Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources.

Educational Administrators:

- a. allocate time, resources, and access to ensure ongoing professional growth in technology fluency and integration
- b. facilitate and participate in learning communities that stimulate, nurture, and support administrators, faculty, and staff in the study and use of technology
- c. promote and model effective communication and collaboration among stakeholders using digital-age tools
- d. stay abreast of educational research and emerging trends regarding effective use of technology and encourage evaluation of new technologies for their potential to improve student learning

4. Systemic Improvement.

Educational Administrators provide digital-age leadership and management to continuously improve the organization through the effective use of information and technology resources.

Educational Administrators:

- a. lead purposeful change to maximize the achievement of learning goals through the appropriate use of technology and media-rich resources
- b. collaborate to establish metrics, collect and analyze data, interpret results, and share findings to improve staff performance and student learning
- c. recruit and retain highly competent personnel who use technology creatively and proficiently to advance academic and operational goals
- d. establish and leverage strategic partnerships to support systemic improvement
- e. establish and maintain a robust infrastructure for technology including integrated, interoperable technology systems to support management, operations, teaching, and learning

5. Digital Citizenship.

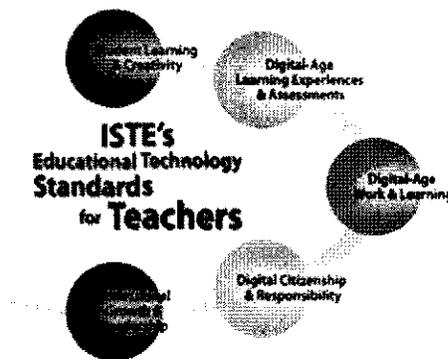
Educational Administrators model and facilitate understanding of social, ethical, and legal issues and responsibilities related to an evolving digital culture.

Educational Administrators:

- a. ensure equitable access to appropriate digital tools and resources to meet the needs of all learners
- b. promote, model, and establish policies for safe, legal, and ethical use of digital information and technology
- c. promote and model responsible social interactions related to the use of technology and information
- d. model and facilitate the development of a shared cultural understanding and involvement in global issues through the use of contemporary communication and collaboration tools

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NETS FOR TEACHERS 2008



1. Facilitate and Inspire Student Learning and Creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.

Teachers:

- a. promote, support, and model creative and innovative thinking and inventiveness.
- b. engage students in exploring real-world issues and solving authentic problems using digital tools and resources.
- c. promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes.
- d. model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments.

2. Design and Develop Digital-Age Learning Experiences and Assessments

Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S.

Teachers:

- a. design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity.
- b. develop technology-enriched learning environments that enable all students to

pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress.

- c. customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources.
- d. provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching.

3. Model Digital-Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

Teachers:

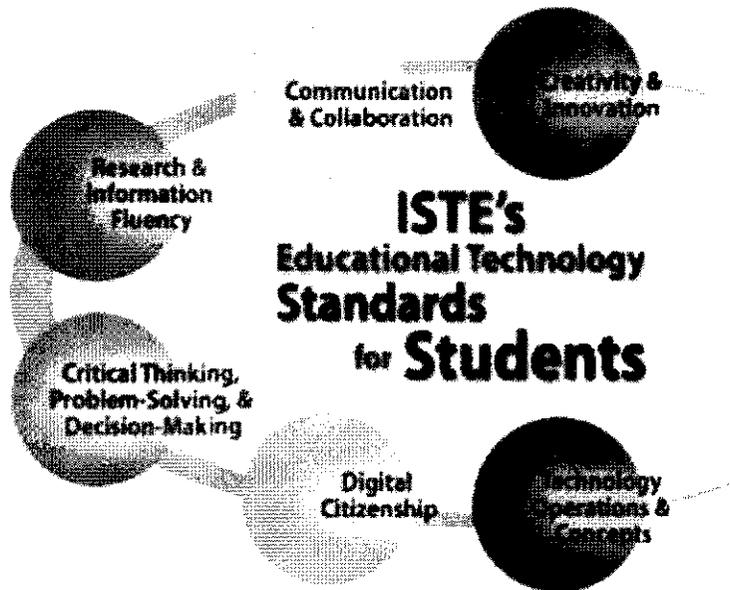
- a. demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations.
- b. collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation.
- c. communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats.
- d. model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning.

4. Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.

Teachers:

- a. advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources.
- b. address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources.
- c. promote and model digital etiquette and responsible online social interactions.



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.

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