



iste International Society for
Technology in Education

National Educational Technology Standards for Teachers

Nebraska Educator Competencies in Technology

March 2001

Guidelines from
the Nebraska Department of Education
Technology Center

This document was created by a task force made up of representatives from the Nebraska Department of Education, Nebraska State Education Association, Nebraska Education Technology Association, K-12 Classroom Teachers, Higher Education, Technology Coordinators and Educational Service Units.

International Society for Technology in Education Standards Nebraska Examples of Performance Indicators

I. Technology Operations and Concepts

ISTE Standard

Teachers demonstrate a sound understanding of technology operations and concepts.

ISTE Indicators

- Teachers demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in ISTE's Technology Standards for Students).
- Teachers demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

Examples of Performance Indicators for Nebraska Educators

- Use basic computer operations such as editing, file management, printing, e-mail, multi-tasking, and networking.
- Evaluate the capability of a computer system and identify appropriate software and peripherals that are compatible with the system.
- Operate a computer and peripherals on a network or through remote access.
- Use Internet applications such as telnet, Web browsers, file transfer protocol,
- Listservs and Newsgroups, web portals, and search engines.
- Apply basic maintenance and troubleshooting strategies for the hardware, software, and network components of the computer systems.
- Utilize help or support resources in solving problems.
- Use technologies to access professional interchange networks, and research databases like ERIC to access and exchange information.
- Use terminology related to computer and technology appropriately in written and oral communication.
- Use synchronous (live) and asynchronous (delayed) communication technologies for classroom and extended learning situations.
- Understand the implications of the growing interdependence of technologies.
- Use productivity tools to enhance professional tasks such as correspondence, assessment, classroom materials, presentations, etc.

II. Planning and Designing Learning Environments and Experiences

ISTE Standard

Teachers plan and design effective learning environments and experiences supported by technology.

ISTE Indicators

- Teachers design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- Teachers apply current research on teaching and learning with technology when planning learning environments and experiences.
- Teachers identify and locate technology resources and evaluate them for accuracy and suitability.
- Teachers plan for the management of technology resources within the context of learning activities.
- Teachers plan strategies to manage student learning in a technology-enhanced environment.

Examples of Performance Indicators for Nebraska Educators

- Know how to assess, select, and use a variety of hardware types to support instruction such as:
 - ✓ Computer systems
 - ✓ CD-ROMs
 - ✓ Scanners
 - ✓ Projection devices
 - ✓ Calculators
 - ✓ Audio/video recorders and players
 - ✓ DVDs
 - ✓ Cameras
 - ✓ Wireless PDAs
 - ✓ Distance education systems
- Know how to assess, select, and use a variety of tool-based and content-based software to support learning.
- Correlate the use of technology in learning environments to the application of technology in society.
- Effectively use broadcast instruction, audio/video conferencing, web-based instruction, and other emerging learning applications.
- Develop customized learning materials using word-processing, database, spreadsheet, hypermedia, web authoring, video, graphics, desktop publishing, and other emerging applications.
- Understand and apply the characteristics of learners and the nature of the learning task of the selection and use of technology-based instructional strategies and presentation techniques.

- Implement various instructional technology strategies that support:
 - ✓ Interdisciplinary approaches
 - ✓ Adjusting instruction to accommodate individual characteristics (i.e., multiple intelligences and learning styles)
 - ✓ Enhancing human interaction
 - ✓ Diagnostic and achievement assessments
- Design and manage the physical learning environment to facilitate the implementation of instructional technology in teaching and learning.

III. Teaching, Learning, and the Curriculum

ISTE Standard

Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning.

ISTE Indicators

- Teachers facilitate technology-enhanced experiences that address content standards and student technology standards.
- Teachers use technology to support learner-centered strategies that address the diverse needs of students.
- Teachers apply technology to develop students' higher-order skills and creativity.
- Teachers manage student learning activities in a technology-enhanced environment.

Examples of Performance Indicators for Nebraska Educators

- Integrate the Nebraska Student Essential Learnings in Technology into curriculum plans to assist with student achievement of standards.
<http://www.nde.state.ne.us/TEHCEN/comp/comp.html>
- Model technology as a research, productivity, presentation, and communication tool.
- Differentiate between appropriate and inappropriate uses of technology in teaching and learning.
- Align appropriate technologies with teaching and learning tasks.
- Apply best teaching, learning, and assessment practices such as:
 - ✓ Utilize instructional technologies to promote interdisciplinary approaches
 - ✓ Use technology to support cooperative and collaborative learning strategies
 - ✓ Match appropriate technologies with multiple intelligences, student learning characteristics, and learning styles
 - ✓ Use technology to support active exploration and problem-based and inquiry-based learning
 - ✓ Use technology to extend the learning environment beyond the classroom walls (i.e., collaborative projects, scientists, researchers, virtual field trips, etc.)
 - ✓ Implement various strategies to create student ownership and accountability when utilizing technology in the curriculum
- Use technology to bridge social, economic, and cultural boundaries.
- Identify and implement assistive technologies when and where appropriate.
- Provide students with access to quality distance education when appropriate.

- Use technology to facilitate effective learner-centered instruction.
- Create and use learning activities that incorporate technology while considering the diverse needs of students.
- Use technology to manage curricular resources, such as assessment, attendance, productivity, and communication.
- Use technology to assist with assessment and documentation of standards.
- Use technology to build stronger partnerships with parents and the greater community (i.e., post lessons and grades on the web).
- Use technology to communicate with others, including educators, administrators, parents, and experts.
- Use a variety of technologies to assist students in developing portfolios.

IV. Assessment and Evaluation

ISTE Standard

Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.

ISTE Indicators

- Teachers apply technology in assessing student learning of subject matter using a variety of assessment techniques.
- Teachers use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.
- Teachers apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.

Examples of Performance Indicators for Nebraska Educators

- Use digital portfolios to assess and report student progress.
- Use student management programs or electronic grade books for record keeping.
- Use technology to collect qualitative and quantitative data to help in student evaluation.
- Use multiple methods of electronic evaluation, such as:
 - ✓ Online assessment
 - ✓ Evaluation of student portfolios
 - ✓ Authentic assessment of students through products, performances, and/or presentations
- Use technology to track student progress in order to demonstrate proficiency of standards.
- Use technology to collect, compile, and analyze student data to adjust and improve instruction.
- Implement various assessment strategies when utilizing technology in the curriculum.
- Use technology to analyze class performance and compare to a larger set of students locally, statewide, or nationally.
- Use e-mail, web-based resources, databases, and other appropriate telecommunications to provide rapid feedback about performance.

V. Productivity and Professional Practice

ISTE Standard

Teachers use technology to enhance their productivity and professional practice

ISTE Indicators

- Teachers use technology resources to engage in ongoing professional development and lifelong learning.
- Teachers continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- Teachers apply technology to increase productivity.
- Teachers use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

Examples of Performance Indicators for Nebraska Educators

- Use multimedia, hypermedia, and telecommunications to support effective instructional activities for lessons, presentations, demonstrations, and student projects.
- Utilize resources such as Educational Service Units, Nebraska Department of Education, Internet, professional organizations, conferences, and journals to remain current in educational technologies.
- Implement various assessment strategies when utilizing technology in the curriculum.
- Use productivity tools to enhance professional tasks such as:
 - ✓ Correspondence
 - ✓ Assessment
 - ✓ Presentations
 - ✓ Problem solving
 - ✓ Data collection
 - ✓ Information management
 - ✓ Communication
 - ✓ Decision-making
- Understand and apply the characteristics of learners and the nature of the learning task to the selection and use of technology-based instructional strategies and presentation techniques.
- Utilize technologies to access information to enhance professional productivity, conduct research, and communicate through local and global professional networks.
- Select and implement the appropriate hardware, software, and peripherals for the teaching and learning task.
- Use technology to enhance school/home/community communications.
- Identify how the utilization of technology enhances student achievement.

- Understand and apply appropriate attitudes and skills toward:
 - ✓ The change process
 - ✓ Ongoing training
 - ✓ New ideas
 - ✓ Adapting technologies and strategies to individual and group needs
 - ✓ Utilization of available resources
- Use technology to remain current in specific disciplines.

V. Social, Ethical, Legal and Human Issues

ISTE Standard

Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PreK-12 schools and apply those principles in practice.

ISTE Indicators

- Teachers model and teach legal and ethical practice related to technology use.
- Teachers apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- Teachers identify and use technology resources that affirm diversity.
- Teachers promote safe and healthy use of technology resources.
- Teachers facilitate equitable access to technology resources for all students.

Examples of Performance Indicators for Nebraska Educators

- Model behaviors in and outside the classroom that promote ethical and legal use of technology-based resources.
- Understand and uphold current copyright laws, rights, and responsibilities.
- Demonstrate an understanding of the impact of change and a need for life-long learning when infusing technology into teaching and learning.
- Select technology resources and print materials that reflect a diverse world.
- Design student learning activities that foster the equitable, ethical, and legal use of technology by students.