

Technology Plan:  
LaRue County School District  
Hodgenville, Kentucky



<http://www.larue.kyschools.us>

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# Acknowledgments

## **District Technology Staff**

Freddie Newby – CIO

Paul Richardson – Network Admin

William Rucker – Network Technician

## **School Library Media Specialists**

Amy Loyall – LaRue County High

Channon Constant – LaRue County Middle

Sharron Butler – Hodgenville Elementary

Jennifer Perkins – Abraham Lincoln Elementary

## **Additional District Contributors**

Sam Sanders - Superintendent

Amanda Reed – Assistant Superintendent

Farrah Pruitt – Board Member

Paul Handley – Board Member

Dawn Conner – Board Member

Joanna Hinton– Board Member

Price Smith – Board Member

## **STLP Coordinators**

Jorge Venegas – LaRue County High

Summer Garris – LaRue County Middle

Jennifer Price – Hodgenville Elementary

Meredith Richardson – Abraham Lincoln Elementary

## **Technology Resource Teachers**

Theresa Banks – LaRue County High

Jennifer Adams – LaRue County Middle

Laura Bauer – Hodgenville Elementary

Judy Carmine – Abraham Lincoln Elementary

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## **Executive Summary**

**MISSION STATEMENT** - The mission of LaRue County School district, as the primary provider of lifelong learning opportunities, is to provide students with the knowledge and skills to function in an age of advanced technology in a global society by guaranteeing relevant and individualized learning experiences integrating all resources of the community.

The LaRue County School District prides itself in its innovative technology and committed understanding of the importance of technology in an effective instructional environment. The LaRue County School district currently provides more than 2,400 students with up to date technology and strives to maintain a high level of standard for our students as we prepare them for their future. This technology provides teachers as well as students a variety of tools that when used correctly can greatly enhance educational effectiveness. Through this plan, the LaRue County School District will move forward in technology and develop engaged and technologically knowledgeable students.

## **Planning Process / Methodology**

The LaRue County School District follows the standards for technology established by the Kentucky Department of Education. The Kentucky Board of Education has endorsed the National Education Technology Standards (NETS) for Students as Kentucky's educational student technology standards. The board is calling for all schools and districts to use the six categories of technology mastery, published by the International Society for Technology (ISTE), as guidelines for planning technology-based core content lessons.

## Technology Vision and Goals

**Goal: To use technology resources effectively to support student learning.**

<b>Strategy/Activity</b>	<b>Expected Impact</b>	<b>Responsible Person(s)</b>	<b>Start Date</b>	<b>End Date</b>	<b>Cost</b>	<b>Fund Source</b>
Teachers will integrate the use of technology into the core content areas.	Teachers will use technology more in the classroom	Professional Development Coordinator, Principals,	July 2016	Ongoing	\$0	None
Teachers will use productivity tools such as PowerPoint and Microsoft Office.	Teachers will have more effective instruction.	Principals	July 2016	Ongoing	\$0	None
Math department teachers will learn how to use graphing calculators, geometry sketchpads, and other technology.	Increased use of technology to increase test scores.	Principals, Professional Development Coordinator, Math Curriculum Specialist	July 2016	Ongoing	\$0	None
Teachers and/or students will use online resources such as the Kentucky Virtual Library and list serves.	Increase use of free technology offerings.	School Technology Coordinator, Media Specialist,	July 2016	Ongoing	\$0	None
Teachers will evaluate students using a variety of assessment tools. (presentations, webpages, projects)	Increase use of varied assessments strategies	Principals, Teachers	July 2016	Ongoing	\$0	None
Teachers and students will have access to district-provided electronic tools and resources at home (eg. Renaissance Place, Infinite Campus, Cloud Based Digital Storage)	Increase the use of technology	CIO	July 2016	Ongoing	\$0	None
Teachers, students, and parents will have access to IC resources.	Increase communications	CIO, Principals, Teachers	July 2016	Ongoing	\$14,800	Board General

## Student Technology Literacy Skills

**Goal: To increase the use of technology by students as a tool for learning and skill building.**

<b>Strategy/Activity</b>	<b>Expected Impact</b>	<b>Responsible Person(s)</b>	<b>Start Date</b>	<b>End Date</b>	<b>Cost</b>	<b>Fund Source</b>
A STLP will be established in all schools, which will encourage participation of all students regardless of race, gender, or socio-economic background.	Increased technology use by all students.	School Technology Coordinator TRT's Principals	July 2016	Ongoing	\$2,000 annually	Board Technology and School Technology
Math students will use technology devices such as graphing calculators and Acc. Math	Increased Math scores on the KPREP & EOC.	Math Teachers Principals	July 2016	Ongoing	\$0 annually	School level funding sources
Students will use KET science programs, internet, science software, and equipment to enhance science skills.	Increased science scores on the KPREP & EOC.	Science Teachers, Principals	July 2016	Ongoing	\$0	None
Elementary and middle school students will participate in Moby Math, i-Ready, and Accelerated Reader.	Increased reading scores on KPREP & EOC	Classroom teachers, Media Specialists, STC, Principals	July 2016	Ongoing	\$40,000 annually	District and School Level Funding Sources
Elementary students will be given the opportunity to learn keyboarding.	Improved keyboarding skills.	Principals	July 2016	Ongoing	\$0	None
Students and teachers will use the internet and network storage to create distinguished work as well as increase learning.	Improved KPREP & EOC scores and improved participation in the educational process.	TRTs, Network Admin, Principals	July 2016	Ongoing	\$0	None
Maintain STLP (help desk) program at the high school.	Students will improve technical and social skills to better prepare them for the IT field.	Instructional Supervisor, CIO, STLP Teacher, Network Admin	July 2016	Ongoing	\$0	None
Students will use email to communicate with teachers and peers about assignments etc.	Effective, two-way communications between students and teachers	Teachers, CIO, Network Admin, TRTs	July 2016	Ongoing	\$0	KETS

## Integration of Technology into Curricula and Instruction

<i>Strategy/Activity</i>	<i>Expected Impact</i>	<i>Responsible Person(s)</i>	<i>Start Date</i>	<i>End Date</i>	<i>Cost</i>	<i>Fund Source</i>
Teachers will use LanSchool to assess student understanding and provide collaboration through technology.	Teachers will better collaborate with students	Teachers, Principals, Professional Development Coordinator	July 2016	Ongoing	\$0	KETS
Teachers will utilize V-Class (Moodle) to provide a central repository, forum location, etc.	Teachers will use technology more in the classroom	Teachers, Principals, Professional Development Coordinator	July 2016	Ongoing	\$0	None
Teachers will use Microsoft Office productivity tools such as PowerPoint, Word, etc.	Teachers will have more effective instruction.	Teachers, Principals	July 2016	Ongoing	\$18,000 annually	KETS
Math department teachers will learn how to use graphing calculators, geometry sketchpads, and other technology.	Increased use of technology to increase test scores.	Teachers, Principals, Professional Development Coordinator	July 2016	Ongoing	\$0	None
Teachers and/or students will use online resources such as the Kentucky Virtual Library and list serves.	Increase use of free technology offerings.	Teachers, School Technology Coordinator, Media Specialist	July 2016	Ongoing	\$0	None
Teachers will evaluate students using a variety of assessment tools. (presentations, webpages, projects)	Increase use of varied assessments strategies	Principals, Teachers	July 2016	Ongoing	\$0	None
Elementary School students and teachers will provided Chromebooks to integrate Google Apps for Education into instruction.	Increase use of a variety of technology tools and platforms	Teachers, Principals, TRTs, CIO, Network Admin	July 2018	Ongoing	\$50,000	KETS
Teachers and students will have access to district-provided electronic tools and resources at home (e.g. Renaissance Place, Carnegie Learning)	Increase the use of technology	CIO, Network Admin	July 2016	Ongoing	\$23,800	Board General, School level funding sources



## Staff Training/ Professional Development Goals

**Goal: To develop professional development programs that address the needs and abilities of the teaching staff.**

<b>Strategy/Activity</b>	<b>Expected Impact</b>	<b>Responsible Person(s)</b>	<b>Start Date</b>	<b>End Date</b>	<b>Cost</b>	<b>Fund Source</b>
Provide a Technology Resource Teacher to provide teachers with professional development in technology.	Increase effective use of instructional technology	Superintendent, CIO	July 2016	Ongoing	\$70,000	Board General
Provide teachers training on GradeCam to assist in scanning and storing student assessments	Effective instruction embedded into the utilization of technology.	Professional Development Coordinator,	July 2016	Ongoing	\$5,000	Instructional Funds
Teachers will be made available training in Microsoft Office, Web Authoring, Smart Board Software, and any new programs with an emphasis on technology integration.	Staff will have improved technology skills and be more effective teachers.	TRTs	July 2016	Ongoing	\$0	None
Provide training on using Google Apps for Education.	Provide additional tools to improve instruction.	CIO, TRTs and Instructional Supervisors	July 2016	Ongoing	\$0	None
New staff will be trained on Infinite Campus	Decreased time spent on student management and allow more time for instruction	Instructional Supervisors	July 2016	Ongoing	\$0	None

## **Current Technology and Resources**

The district computer to student ratio is 1.03:1. Our High school has 800 Windows laptops and provides a laptop to every student to use at school and home for instructional purposes. There are approximately 25 computers in the Instructional Technology dept. classrooms. The middle school also has a 1:1 environment that includes 800 laptops. Both Elementary schools have at least one lab of 30 student computers and no less than 5 computers in every classroom. Abraham Lincoln Elementary has 150 Chromebooks in carts and Hodgenville Elementary has 120 Chromebooks in carts.

All schools have intelligent classrooms with an overhead projector, interactive board, slate, document camera, and audio to provide for a feature rich instructional environment. As current projectors and boards become inoperable, schools have been replacing them with large format (65" or larger) commercial grade touch screen monitors.

All schools and classrooms have internet access, all students have email accounts, and several applications are provided to staff and students such as Microsoft office, Renaissance Place, Moodle, Destiny, Lexia, LANSchool, etc.

One Technology Resource Technician is provided to each school for technical support and technology training. Training is provided to staff based on the needs developed by the school. Training is also provided to staff as new technologies and applications are adopted.

## Evaluation

**Goal: To develop processes to evaluate the planning and implementation of technology resource.**

<b>Strategy/Activity</b>	<b>Expected Impact</b>	<b>Responsible Person(s)</b>	<b>Start Date</b>	<b>End Date</b>	<b>Cost</b>	<b>Fund Source</b>
Success of programs will be determined by varying forms of assessment, scores as well as lesson plans and questionnaires.	More efficient use of technology. Improved State test scores.	CIO, Principals, Curriculum Specialists	July 2016	Ongoing	\$0	None
<b>Process to Review and Update Plan: <i>The Technology and Learning Plan is viewed as a guiding document, to be reviewed and updated as needed. The plan will be reviewed at least annually, to assess current progress and make adjustments as needed.</i></b>						
<b>Plan Review and Update Activities/Objectives</b>		<b>Person/Team Responsible</b>			<b>Purchases/Budget Potential Funding Source(s)</b>	
<ul style="list-style-type: none"> <li>-- Review the technology plan; identify progress and evaluate changes needed;</li> <li>-- Assess integration of technology within the curriculum</li> <li>-- Determine needs for training of teachers in the technology areas and develop appropriate content;</li> <li>-- Review staff input from the sessions;</li> </ul>		CIO, District Technology Committee, TRTs with Directors, School-level administrators			None	
Professional Development <ul style="list-style-type: none"> <li>-- Provide leadership for professional development;</li> <li>-- Manage the technology grants and budgets to reflect the needs of the students and staff K-12;</li> <li>-- Maintain current inventories and adjust as outlined in the plan;</li> <li>-- Provide service and repair to maintain equipment and networks;</li> <li>-- Gather data for state and local reports.</li> </ul>		CIO, Technology support staff			None	
<ul style="list-style-type: none"> <li>-- Provide leadership, support and alignment for technology integration, curriculum development and assessment</li> </ul>		The Superintendent, School Board, Technology Committee			None	

<b>Acquired Technologies and Professional Development</b>	<b>Ed Tech Competitive Title IID</b>	<b>Ed Tech Formula Title II</b>	<b>E-Rate</b>	<b>NCLB/other than Title IID</b>	<b>KETS</b>	<b>Other (Specify)</b>
Technology Integration PD for laptop initiative		\$5,000				
Technology Staff Salaries						General Fund \$175,000
Software (School Agreement with MS)					KETS Fund \$18,000 annually	
Chromebooks for Elementary Schools					KETS \$50,000	
Infrastructure Upgrades (Switching Equipment)					KETS \$10,000	
Voice Services Local and Long Distant			\$25,200			
Fiber Lease / VPN for Data			\$52,800			
Web Hosting			\$4,300			
<b>TOTAL</b>		\$5,000	\$82,300		\$78,000	\$175,000

<b>Service</b>	<b>Educational Goals</b>	<b>Purchase / Budget / Potential Funding Sources</b>	<b>Review and Update Strategy</b>
<i>USF Description</i>	<i>the plan must establish clear goals and a realistic strategy for using telecommunications and information technology to improve education or library services;</i>	<i>the plan must provide for a sufficient budget to acquire and maintain the hardware, software, professional development, and other services that will be needed to implement the strategy; and</i>	<i>the plan must include an evaluation process that enables the school or library to monitor progress toward the specified goals and make mid-course corrections in response to new developments and opportunities as they arise.</i>
<b>Hosted Web Service</b>	To provide a cms (content management system) for staff to collaborate with students and parents. It is also our primary tool for communicating with the public as well.	\$4,300 annual – LOCAL FUNDS	Random verification of teacher use as well as student and parent access.
<b>Local Voice</b>	Telephone lines in every instructional and administrative area are essential for parent teacher communications.	\$21,600 annual – local funds, erate	Survey staff to determine adequacy of new system implementations and effectiveness of user training.
<b>Long Distance Voice</b>	Long distance lines are necessary for vendor support services of school management and curriculum software.	\$3,600 annual Local funds, e-rate  Local PD funds for training as needed	Survey building administrators to determine adequacy of existing system implementations and effectiveness of user training. Additional lines are requested through this method.
<b>Cellular Service</b>	Cell phones are used by school and district support personnel in support of student services by school and district administration, transportation, maintenance, and school safety.	\$3,800 – local funds  Local PD funds for training as needed	Survey building administrators to determine adequacy of existing system implementations and effectiveness of user training. Additional phones are requested through this method.
<b>Data Circuits</b>	Data circuits provide e-mail and Internet access for both schools and district to ISP.	\$52,800 – Local Funds, E-rate  Training is funded Board General  KDE/ISP –State shared expense	--Monitor usage.  --Expand Gigabit Ethernet connectivity as necessary to pride quality of service in the client/server environment. Monitor usage and make adjustments to infrastructure as needed  -Conduct staff and student surveys to assess the effectiveness of this technology as a means to communicate, share information, work collaboratively, and enrich the learning experience.

## **Attachments/Appendices**

The list of computer skills developed by ISTE is widely accepted nationwide and will be the basis for Kentucky's Computer Literacy Standards. ISTE's student standards are divided into six broad categories.

1. Basic operations and concepts
2. Social, ethical and human issues
3. Technology productivity tools
4. Technology communication tools
5. Technology research tools
6. Technology problem-solving and decision-making tools.

Performance Indicators for student Technology standards are broken down into the following grade groups:

Grades PreK -2,  
Grades 3-5,  
Grades 6-8,  
Grades 9-12

### **Prior to completion of Grade 2, students will:**

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. (1)
2. Use a variety of media and technology resources for directed and independent learning activities. (1, 3)
3. Communicate about technology using developmentally appropriate and accurate terminology. (1)
4. Use developmentally appropriate multimedia resources (e.g., interactive books, educational software, elementary multimedia encyclopedias) to support learning. (1)
5. Work cooperatively and collaboratively with peers, family members, and others when using technology in the classroom. (2)
6. Demonstrate positive social and ethical behaviors when using technology. (2)
7. Practice responsible use of technology systems and software. (2)
8. Create developmentally appropriate multimedia products with support from teachers, family members, or student partners. (3)
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. (3, 4, 5, 6)
10. Gather information and communicate with others using telecommunications, with support from teachers, family members, or student partners. (4)

**Prior to completion of Grade 5, students will:**

1. Use keyboards and other common input and output devices (including adaptive devices when necessary) efficiently and effectively. (1)
2. Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide. (1, 2)
3. Discuss basic issues related to responsible use of technology and information and describe personal consequences of inappropriate use. (2)
4. Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum. (3)
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. (3, 4)
6. Use telecommunications efficiently to access remote information, communicate with others in support of direct and independent learning, and pursue personal interests. (4)
7. 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. (4, 5)
8. Use technology resources (e.g., calculators, data collection probes, videos, educational software) for problem solving, self-directed learning, and extended learning activities. (5, 6)
9. Determine which technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems. (5, 6)
10. Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources. (6)

**Prior to completion of Grade 8, students will:**

1. Apply strategies for identifying and solving routine hardware and software problems that occur during everyday use. (1)
2. Demonstrate knowledge of current changes in information technologies and the effect those changes have on the workplace and society. (2)
3. Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse. (2)
4. Use content-specific tools, software, and simulations (e.g., environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research. (3, 5)
5. Apply productivity/multimedia tools and peripherals to support personal productivity, group collaboration, and learning throughout the curriculum. (3, 6)
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. (4, 5, 6)
7. 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. (4, 5)
8. Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems. (5, 6)

9. Demonstrate an understanding of concepts underlying hardware, software, and connectivity, and of practical applications to learning and problem solving. (1, 6)
10. Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems. (2, 5, 6)

**Prior to completion of Grade 12, students will:**

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)
2. Make informed choices among technology systems, resources, and services. (1, 2)
3. Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole. (2)
4. Demonstrate and advocate for legal and ethical behaviors among peers, family, and community regarding the use of technology and information. (2)
5. Use technology tools and resources for managing and communicating personal/professional information (e.g., finances, schedules, addresses, purchases, correspondence). (3, 4)
6. Evaluate technology-based options, including distance and distributed education, for lifelong learning. (5)
7. Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity. (4, 5, 6)
8. Select and apply technology tools for research, information analysis, problem-solving, and decision-making in content learning. (4, 5)
9. Investigate and apply expert systems, intelligent agents, and simulations in real-world situations. (3, 5, 6)
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. (4, 5, 6)

Many of the strategies and recommendations are taken from various plans already in the district, and compiled into one technology document. Plans utilized are the Comprehensive School Improvement Plan for district and schools, Professional Development Plans for schools and District, Acceptable Use Policy, and the KETS Master Plan for 2008-20012.

- GOALS**
1. To use technology resources effectively to support student learning.
  2. To increase the use of technology by students as a tool for learning and skill building.
  3. To use technology resources and equipment in an ethical and responsible way.
  4. To ensure that district and school leaders share a vision for the role of technology in transforming learning.



5. To develop professional development programs that addresses the needs and abilities of the teaching staff.
6. To work actively with parents, higher education, community, and businesses to promote technology.
7. To provide technical capacity and assistance to schools and district.
8. To develop processes to evaluate the planning and implementation of technology resource.

## **NATIONAL EDUCATION TECHNOLOGY STANDARDS**

### **NETS for Administrators**

#### **Educational Technology Standards and Performance Indicators for Administrators**

##### **I. LEADERSHIP AND VISION.**

Educational leaders inspire a shared vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision. Educational leaders:

- A. Facilitate the shared development by all stakeholders of a vision for technology use and widely communicate that vision.
- B. maintain an inclusive and cohesive process to develop, implement, and monitor a dynamic, long-range, and systemic technology plan to achieve the vision.
- C. foster and nurture a culture of responsible risk-taking and advocate policies promoting continuous innovation with technology.
- D. use data in making leadership decisions.
- E. Advocate for research-based effective practices in use of technology.
- F. Advocate on the state and national levels for policies, programs, and funding opportunities that support implementation of the district technology plan.

##### **II. LEARNING AND TEACHING.**

Educational leaders ensure that curricular design, instructional strategies, and learning environments integrate appropriate technologies to maximize learning and teaching. Educational leaders:

- A. Identify, use, evaluate, and promote appropriate technologies to enhance and support instruction and standards-based curriculum leading to high levels of student achievement.
- B. Facilitate and support collaborative technology-enriched learning environments conducive to innovation for improved learning.
- C. provide for learner-centered environments that use technology to meet the individual and diverse needs of learners.

- D. Facilitate the use of technologies to support and enhance instructional methods that develop higher-level thinking, decision-making, and problem-solving skills.
- E. Provide for and ensure that faculty and staff take advantage of quality professional learning opportunities for improved learning and teaching with technology.

### III. PRODUCTIVITY AND PROFESSIONAL PRACTICE.

Educational leaders apply technology to enhance their professional practice and to increase their own productivity and that of others. Educational leaders:

- A. Model the routine, intentional, and effective use of technology.
- B. Employ technology for communication and collaboration among colleagues, staff, parents, students, and the larger community.
- C. Create and participate in learning communities that stimulate, nurture, and support faculty and staff in using technology for improved productivity.
- D. Engage in sustained, job-related professional learning using technology resources.
- E. Maintain awareness of emerging technologies and their potential uses in education.
- F. Use technology to advance organizational improvement.

### IV. SUPPORT, MANAGEMENT, AND OPERATIONS.

Educational leaders ensure the integration of technology to support productive systems for learning and administration. Educational leaders:

- A. Develop, implement, and monitor policies and guidelines to ensure compatibility of technologies.
- B. Implement and use integrated technology-based management and operations systems.
- C. Allocate financial and human resources to ensure complete and sustained implementation of the technology plan.
- D. Integrate strategic plans, technology plans, and other improvement plans and policies to align efforts and leverage resources.
- E. Implement procedures to drive continuous improvement of technology systems and to support technology replacement cycles.

### V. ASSESSMENT AND EVALUATION.

Educational leaders use technology to plan and implement comprehensive systems of effective assessment and evaluation. Educational leaders:

- A. Use multiple methods to assess and evaluate appropriate uses of technology resources for learning, communication, and productivity.
- B. Use technology to collect and analyze data, interpret results, and communicate findings to improve instructional practice and student learning.
- C. Assess staff knowledge, skills, and performance in using technology and use results to facilitate quality professional development and to inform personnel decisions.
- D. Use technology to assess, evaluate, and manage administrative and operational systems.

### VI. SOCIAL, LEGAL, AND ETHICAL ISSUES.

Educational leaders understand the social, legal, and ethical issues related to technology and model responsible decision-making related to these issues. Educational leaders:

- A. Ensure equity of access to technology resources that enable and empower all learners and educators.
- B. Identify, communicate, model, and enforce social, legal, and ethical practices to promote responsible use of technology.
- C. Promote and enforce privacy, security, and online safety related to the use of technology.
- D. Promote and enforce environmentally safe and healthy practices in the use of technology.
- E. Participate in the development of policies that clearly enforce copyright law and assign ownership of intellectual property developed with district resources.

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## **NETS for Teachers**

### **Educational Technology Standards and Performance Indicators for All Teachers**

Building on the NETS for Students, the ISTE NETS for Teachers (NETS•T), which focus on preservice teacher education, define the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings. All candidates seeking certification or endorsements in teacher preparation should meet these educational technology standards. It is the responsibility of faculty across the university and at cooperating schools to provide opportunities for teacher candidates to meet these standards.

The six standards areas with performance indicators listed below are designed to be general enough to be customized to fit state, university, or district guidelines and yet specific enough to define the scope of the topic. Performance indicators for each standard provide specific outcomes to be measured when developing a set of assessment tools. The standards and the performance indicators also provide guidelines for teachers currently in the classroom.

#### **1 TECHNOLOGY OPERATIONS AND CONCEPTS.**

*Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:*

- A. Demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in the ISTE National Education Technology Standards for Students)
- B. Demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

#### **2 PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES.**

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

- A. Design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- B. Apply current research on teaching and learning with technology when planning learning environments and experiences.
- C. Identify and locate technology resources and evaluate them for accuracy and suitability.
- D. Plan for the management of technology resources within the context of learning activities.
- E. Plan strategies to manage student learning in a technology-enhanced environment.

#### **3 TEACHING, LEARNING, AND THE CURRICULUM.**

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

- A. Facilitate technology-enhanced experiences that address content standards and student technology standards.
- B. Use technology to support learner-centered strategies that address the diverse needs of students.
- C. Apply technology to develop students' higher order skills and creativity.

- D. Manage student-learning activities in a technology-enhanced environment.

#### **4 ASSESSMENT AND EVALUATION.**

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

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

#### **5 PRODUCTIVITY AND PROFESSIONAL PRACTICE.**

*Teachers use technology to enhance their productivity and professional practice. Teachers:*

- A. Use technology resources to engage in ongoing professional development and lifelong learning.
- B. Continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- C. Apply technology to increase productivity.
- D. Use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

#### **6 SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES.**

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

- A. Model and teach legal and ethical practice related to technology use.
- B. Apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- C. Identify and use technology resources that affirm diversity
- D. Promote safe and healthy use of technology resources.
- E. Facilitate equitable access to technology resources for all students.

## **NETS for Students**

### **Technology Foundation Standards for All Students**

The technology foundation standards for students are divided into six broad categories. Standards within each category are to be introduced, reinforced, and mastered by students. These categories provide a framework for linking performance indicators within the Profiles for Technology Literate Students to the standards. Teachers can use these standards and profiles as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills.

#### Technology Foundation Standards for Students

##### **1 Basic operations and concepts**

- A. Students demonstrate a sound understanding of the nature and operation of technology systems.
- B. Students are proficient in the use of technology.

##### **2 Social, ethical, and human issues**

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

##### **3 Technology productivity tools**

- A. Students use technology tools to enhance learning, increase productivity, and promote creativity.
- B. Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

##### **4 Technology communications tools**

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

##### **5 Technology research tools**

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

##### **6 Technology problem-solving and decision-making tools**

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