

# Profile for Technology- Literate Teachers

## GENERAL PREPARATION PERFORMANCE PROFILE

*Upon completion of the general preparation component of their program, prospective teachers:*

1. demonstrate a sound understanding of the nature and operation of technology systems. (I)\*
2. demonstrate proficiency in the use of common input and output devices; solve routine hardware and software problems; and make informed choices about technology systems, resources, and services. (I)\*
3. use technology tools and information resources to increase productivity, promote creativity, and facilitate academic learning. (I, III, IV, V)
4. use content-specific tools (e.g., software, simulation, environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research. (I, III, V)\*
5. use technology resources to facilitate higher order and complex thinking skills, including problem solving, critical thinking, informed decision making, knowledge construction, and creativity. (I, III, V)\*
6. collaborate in constructing technology-enhanced models, preparing publications, and producing other creative works using productivity tools. (I, V)\*

## ISTE NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS

*All classroom teachers should be prepared to meet the following standards and performance indicators.*

### **I. 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 Educational Technology Standards for Students*).
- B. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

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

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

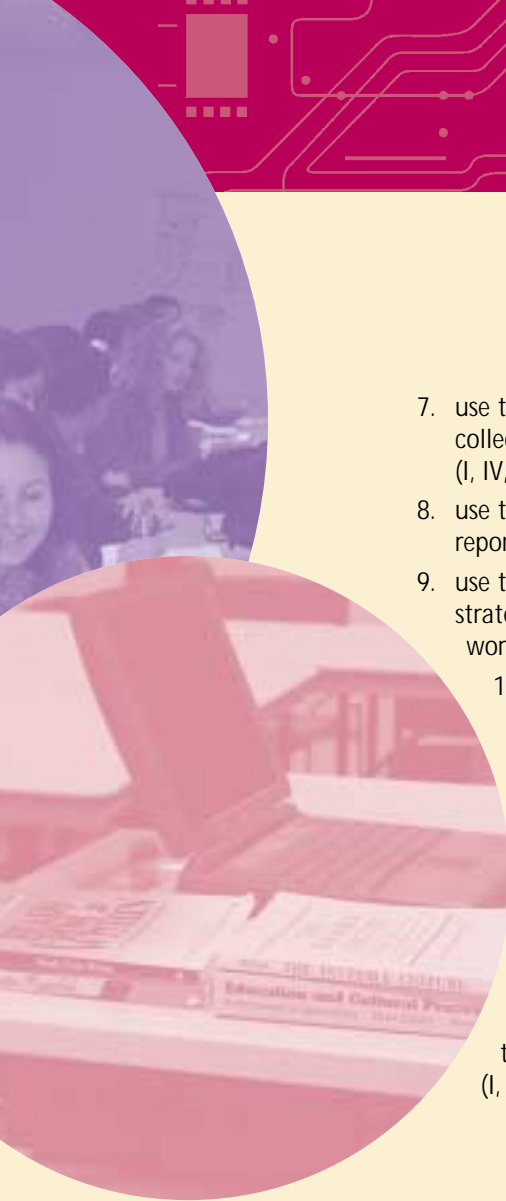
- A. design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- B. apply current research on teaching and learning with technology when planning learning environments and experiences.

- 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.

### **III. 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.

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7. use technology to locate, evaluate, and collect information from a variety of sources. (I, IV, V)\*
  8. use technology tools to process data and report results. (I, III, IV, V)\*
  9. use technology in the development of strategies for solving problems in the real world. (I, III, V)\*
  10. observe and experience the use of technology in their major field of study. (III, V)
  11. use technology tools and resources for managing and communicating information (e.g., finances, schedules, addresses, purchases, correspondence). (I, V)
  12. evaluate and select new information resources and technological innovations based on their appropriateness to specific tasks. (I, III, IV, V)\*
  13. use a variety of media and formats, including telecommunications, to collaborate, publish, and interact with peers, experts, and other audiences. (I, V)\*
  14. demonstrate an understanding of the legal, ethical, cultural, and societal issues related to technology. (VI)\*
  15. exhibit positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity. (V, VI)\*
  16. discuss diversity issues related to electronic media. (I, VI)
  17. discuss the health and safety issues related to technology use. (VI)

\* Adapted from the ISTE *National Educational Technology Standards for Students*.

## (NETS) AND PERFORMANCE INDICATORS FOR TEACHERS

### IV. 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.

### V. 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.

### VI. 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 that understanding 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.

# Profile for Technology- Literate Teachers

## PROFESSIONAL PREPARATION PERFORMANCE PROFILE

*Prior to the culminating student teaching or internship experience, prospective teachers:*

1. identify the benefits of technology to maximize student learning and facilitate higher order thinking skills. (I, III)
2. differentiate between appropriate and inappropriate uses of technology for teaching and learning while using electronic resources to design and implement learning activities. (II, III, V, VI)
3. identify technology resources available in schools and analyze how accessibility to those resources affects planning for instruction. (I, II)
4. identify, select, and use hardware and software technology resources specially designed for use by PK–12 students to meet specific teaching and learning objectives. (I, II)
5. plan for the management of electronic instructional resources within a lesson design by identifying potential problems and planning for solutions. (II)
6. identify specific technology applications and resources that maximize student learning, address learner needs, and affirm diversity. (III, VI)
7. design and teach technology-enriched learning activities that connect content standards with student technology standards and meet the diverse needs of students. (II, III, IV, VI)
8. design and peer teach a lesson that meets content area standards and reflects the current best practices in teaching and learning with technology. (II, III)

## ISTE NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS

*All classroom teachers should be prepared to meet the following standards and performance indicators.*

### **I. 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 Educational Technology Standards for Students*).
- B. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

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

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

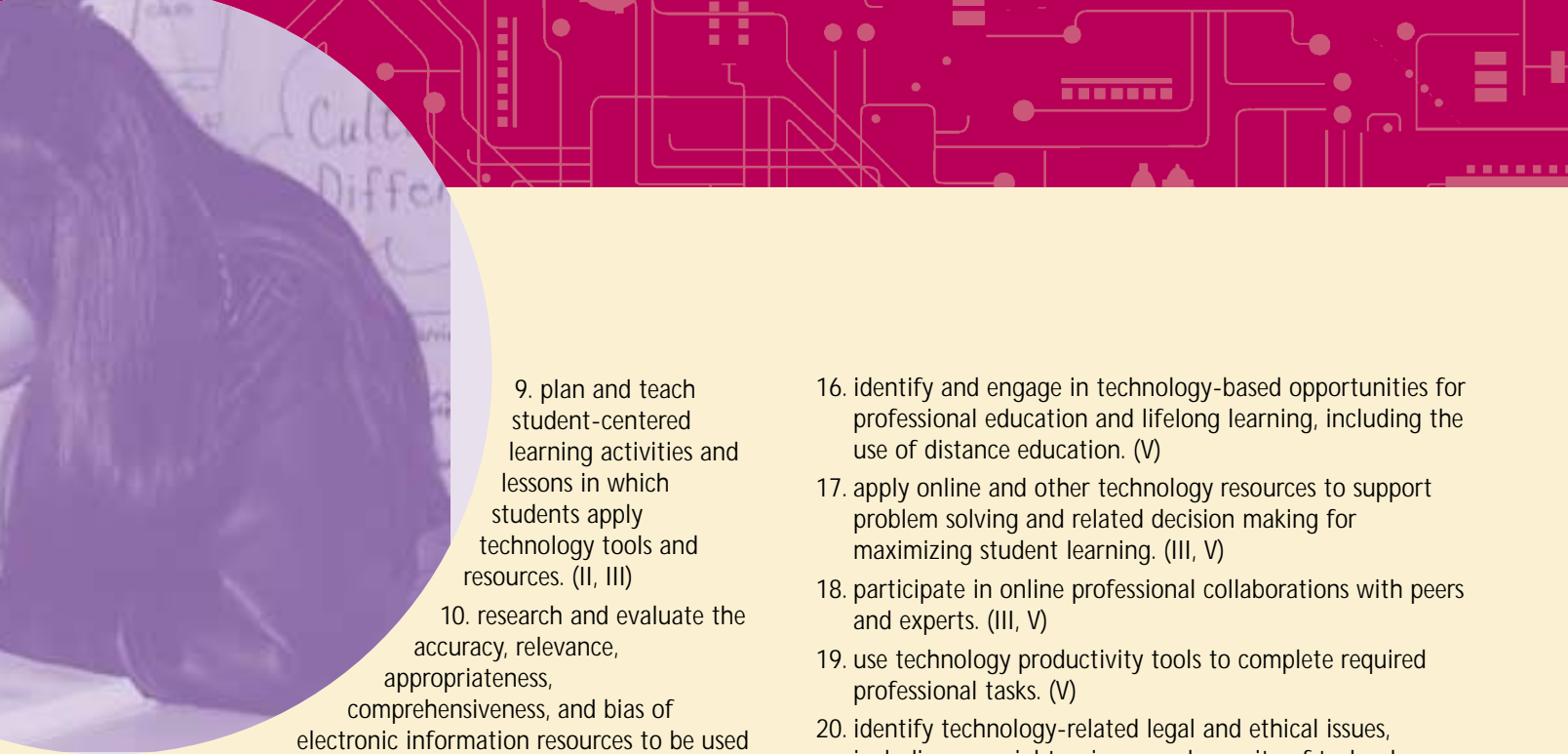
- A. design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- B. apply current research on teaching and learning with technology when planning learning environments and experiences.

- 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.

### **III. 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.



9. plan and teach student-centered learning activities and lessons in which students apply technology tools and resources. (II, III)
10. research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information resources to be used by students. (II, IV, V, VI)
11. discuss technology-based assessment and evaluation strategies. (IV)
12. examine multiple strategies for evaluating technology-based student products and the processes used to create those products. (IV)
13. examine technology tools used to collect, analyze, interpret, represent, and communicate student performance data. (I, IV)
14. integrate technology-based assessment strategies and tools into plans for evaluating specific learning activities. (IV)
15. develop a portfolio of technology-based products from coursework, including the related assessment tools. (IV, V)
16. identify and engage in technology-based opportunities for professional education and lifelong learning, including the use of distance education. (V)
17. apply online and other technology resources to support problem solving and related decision making for maximizing student learning. (III, V)
18. participate in online professional collaborations with peers and experts. (III, V)
19. use technology productivity tools to complete required professional tasks. (V)
20. identify technology-related legal and ethical issues, including copyright, privacy, and security of technology systems, data, and information. (VI)
21. examine acceptable use policies for the use of technology in schools, including strategies for addressing threats to security of technology systems, data, and information. (VI)
22. identify issues related to equitable access to technology in school, community, and home environments. (VI)
23. identify safety and health issues related to technology use in schools. (VI)
24. identify and use assistive technologies to meet the special physical needs of students. (VI)

## (NETS) AND PERFORMANCE INDICATORS FOR TEACHERS

### IV. 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.

### V. 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.

### VI. 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 that understanding 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.



# Profile for Technology- Literate Teachers

## STUDENT TEACHING/INTERNSHIP PERFORMANCE PROFILE

*Upon completion of the culminating student teaching or internship experience, and at the point of initial licensure, teachers:*

1. apply troubleshooting strategies for solving routine hardware and software problems that occur in the classroom. (I)
2. identify, evaluate, and select specific technology resources available at the school site and district level to support a coherent lesson sequence. (II, III)
3. design, manage, and facilitate learning experiences using technology that affirm diversity and provide equitable access to resources. (II, VI)
4. create and implement a well-organized plan to manage available technology resources, provide equitable access for all students, and enhance learning outcomes. (II, III)
5. design and facilitate learning experiences that use assistive technologies to meet the special physical needs of students. (II, III)
6. design and teach a coherent sequence of learning activities that integrates appropriate use of technology resources to enhance student academic achievement and technology proficiency by connecting district, state, and national curriculum standards with student technology standards (as defined in the ISTE *National Educational Technology Standards for Students*). (II, III)

## ISTE NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS

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### **I. 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 Educational Technology Standards for Students*).
- B. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

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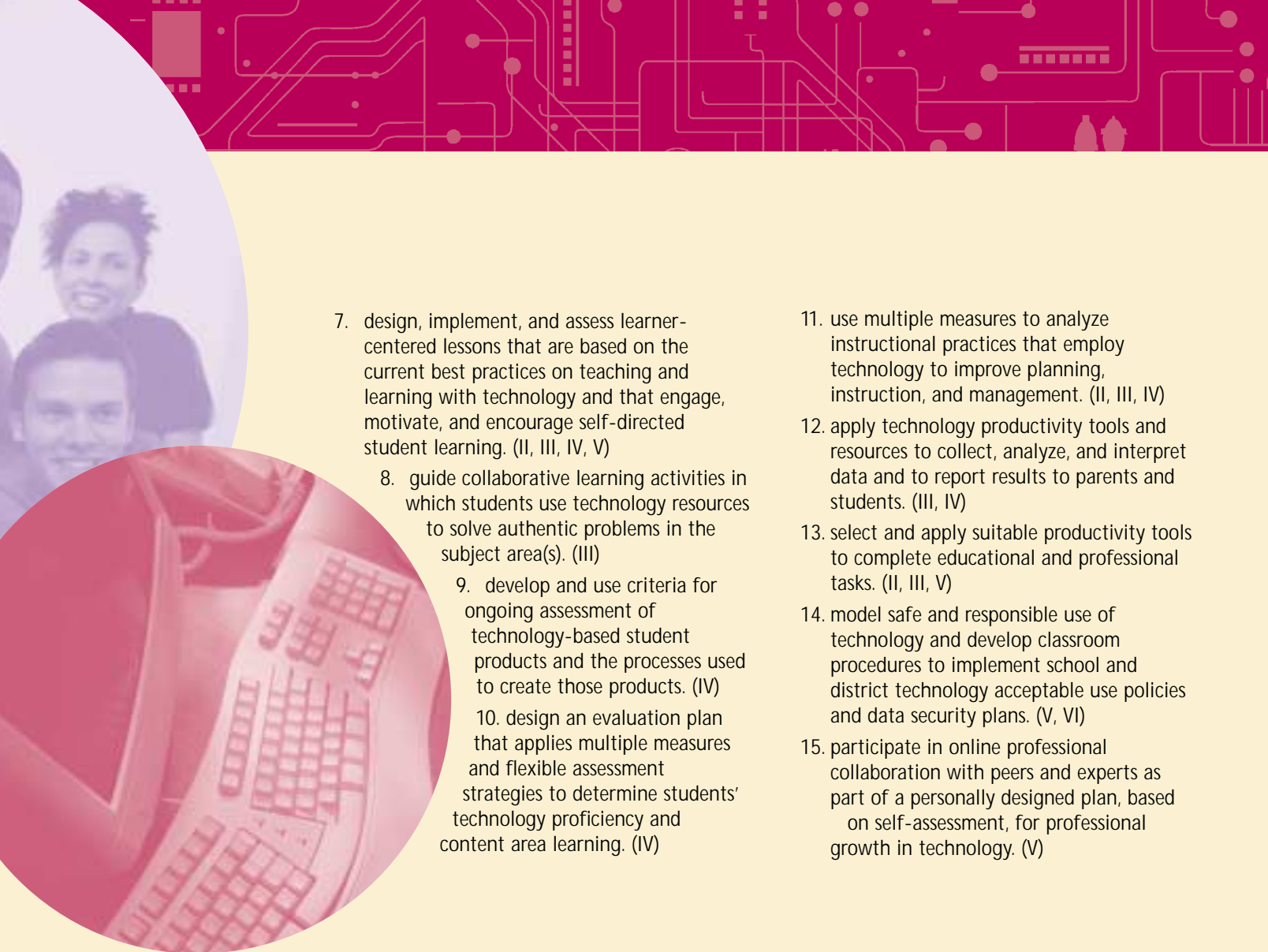
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7. design, implement, and assess learner-centered lessons that are based on the current best practices on teaching and learning with technology and that engage, motivate, and encourage self-directed student learning. (II, III, IV, V)
8. guide collaborative learning activities in which students use technology resources to solve authentic problems in the subject area(s). (III)
9. develop and use criteria for ongoing assessment of technology-based student products and the processes used to create those products. (IV)
10. design an evaluation plan that applies multiple measures and flexible assessment strategies to determine students' technology proficiency and content area learning. (IV)
11. use multiple measures to analyze instructional practices that employ technology to improve planning, instruction, and management. (II, III, IV)
12. apply technology productivity tools and resources to collect, analyze, and interpret data and to report results to parents and students. (III, IV)
13. select and apply suitable productivity tools to complete educational and professional tasks. (II, III, V)
14. model safe and responsible use of technology and develop classroom procedures to implement school and district technology acceptable use policies and data security plans. (V, VI)
15. participate in online professional collaboration with peers and experts as part of a personally designed plan, based on self-assessment, for professional growth in technology. (V)

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# Profile for Technology- Literate Teachers

## FIRST-YEAR TEACHING PERFORMANCE PROFILE

*Upon completion of the first year of teaching, teachers:*

1. assess the availability of technology resources at the school site, plan activities that integrate available resources, and develop a method for obtaining the additional necessary software and hardware to support the specific learning needs of students in the classroom. (I, II, IV)
2. make appropriate choices about technology systems, resources, and services that are aligned with district and state standards. (I, II)
3. arrange equitable access to appropriate technology resources that enable students to engage successfully in learning activities across subject/content areas and grade levels. (II, III, VI)
4. engage in ongoing planning of lesson sequences that effectively integrate technology resources and are consistent with current best practices for integrating the learning of subject matter and student technology standards (as defined in the ISTE *National Educational Technology Standards for Students*). (II, III)
5. plan and implement technology-based learning activities that promote student engagement in analysis, synthesis, interpretation, and creation of original products. (II, III)
6. plan for, implement, and evaluate the management of student use of technology resources as part of classroom operations and in specialized instructional situations. (I, II, III, IV)
7. implement a variety of instructional technology strategies and grouping strategies (e.g., whole group, collaborative, individualized, and learner centered) that include appropriate embedded assessment for meeting the diverse needs of learners. (III, IV)

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8. facilitate student access to school and community resources that provide technological and discipline-specific expertise. (III)
9. teach students methods and strategies to assess the validity and reliability of information gathered through technological means. (II, IV)
10. recognize students' talents in the use of technology and provide them with opportunities to share their expertise with their teachers, peers, and others. (II, III, V)
11. guide students in applying self- and peer-assessment tools to critique student-created technology products and the process used to create those products. (IV)
12. facilitate students' use of technology that addresses their social needs and cultural identity and promotes their interaction with the global community. (III, VI)
13. use results from assessment measures (e.g., learner profiles, computer-based testing, electronic portfolios) to improve instructional planning, management, and implementation of learning strategies. (II, IV)
14. use technology tools to collect, analyze, interpret, represent, and communicate data (student performance and other information) for the purposes of instructional planning and school improvement. (IV)
15. use technology resources to facilitate communications with parents or guardians of students. (V)
16. identify capabilities and limitations of current and emerging technology resources and assess the potential of these systems and services to address personal, lifelong learning, and workplace needs. (I, IV, V)
17. participate in technology-based collaboration as part of continual and comprehensive professional growth to stay abreast of new and emerging technology resources that support enhanced learning for PK–12 students. (V)
18. demonstrate and advocate for legal and ethical behaviors among students, colleagues, and community members regarding the use of technology and information. (V, VI)
19. enforce classroom procedures that guide students' safe and healthy use of technology and that comply with legal and professional responsibilities for students needing assistive technologies. (VI)
20. advocate for equal access to technology for all students in their schools, communities, and homes. (VI)
21. implement procedures consistent with district and school policies that protect the privacy and security of student data and information. (VI)

## (NETS) AND PERFORMANCE INDICATORS FOR TEACHERS

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- 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.