

**5.9 Instructs students in basic technology skills. (CO: 7.5) NETS student standard 6 is related to this standard:**

*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.

	<b>Basic (1.0 - 1.9)</b>	<b>Developing (2.0 - 2.9)</b>	<b>Proficient (3.0 - 3.9)</b>	<b>Advanced (4.0)</b>
<b>Addresses Standards</b>	No evidence of embedding teaching of technology skills within content lessons	Plans at least one lesson plan that embeds the NETS (2007) student standards within a lesson that explicitly addresses content standards; NETS standards must be identified in the plan (NOTE: the lesson need not address instruction in basic technology skills but requires monitoring and informal instruction in technology)	Plans a minimum of one lesson that instructs students in basic technology skill (see above NETS standard 6) in a lesson that addresses a content standard, teaches the lesson, and documents that students acquired technology skill (NOTE: <u>using technology in a lesson does not meet this standard</u> )	Embeds and teaches more than one NETS standard in a lesson that explicitly teaches technology skills, documenting student learning
<b>Assessment (NETS 2a)</b>	No evidence of knowledge or skills at analyzing and assessing students' technology proficiency OR makes errors in matching assessment tools to purposes of assessment and/or in analyzing student performance and drawing conclusions  No evidence that s/he knows the technology skills of students	Appropriately plans at least one measure to analyze and assess students' technology proficiency  Describes prerequisite technology skills necessary for students in at least one lesson plan	Uses more than one measure to analyze and assess students' technology proficiency AND uses resulting data to inform teaching  Provides information that s/he gained information about students' actual technology skills before teaching a lesson aligned with technology standards	Plans and implements multiple measures in assessing students' technology proficiency and uses resulting data to inform teaching  Provides evidence of systematically gaining information about students' technology skills prior to teaching across multiple lessons
<b>Tools Skills</b>	Based on direct observation, s/he has only basic understanding and minimal ability to apply troubleshooting strategies for solving routine hardware and software problems that occur in the classroom	Based on direct observation, s/he is developing knowledge and skills in applying troubleshooting strategies for solving routine hardware and software problems that occur in the classroom but needs assistance at times	Based on direct observation, s/he applies troubleshooting strategies for solving routine hardware and software problems that occur in the classroom without assistance	Exceeds knowledge and skills of most beginning teachers in applying troubleshooting strategies for solving routine hardware and software problems that occur in the classroom; shares this knowledge with other members of the learning community

## Operationalization/Criteria:

**Guidelines for Admission to Education:** *Not evaluated at admission*

**Guidelines for Admission to Student Teaching:** *Meets criteria for "developing" in all three dimensions*

1. Benchmark at admission to student teaching is a rating of "developing" for all dimensions.
2. To evaluate, supervisors should review the material in the portfolio that is attached to the standard, as well as field experience evaluations.

### Examples of Evidence:

Lesson plans, student assessment data, unit plans, videotape of teaching, evaluations of field experience teachers

### Guidelines for Program Completion/Student Teaching:

1. Required for program completion is a rating of "proficient" for all dimensions
2. Observe for student expertise in using equipment; interview student teacher and others to validate observations.
3. Evaluate quality of student information used to plan technology lessons and activities; ask questions of teacher if unclear.
4. Evaluate quality of lesson and student learning.
3. A possible Inventory narrative should describe an example of student performance: e.g., *He taught students to use Inspiration in different stages of ceative writing.*

### Examples of Evidence:

Observation of teaching, lesson plan book, TWS, student data, interviews with teachers with whom student collaborated

### Rationale:

Barnett, H. (2000). Assessing the effects of technology. *Learning and Leading with Technology*, 27(7), 28–31, 63.

Bitter, G.G., & Legacy, J.M. (2008). *Using technology in the classroom*, 7th ed. Upper Saddle rivers, NJ: Allyn & Bacon.

Cajas, F. (2000, Fall). Technology education research: potential directions. *Journal of Technology Education*, 12 (1), 75-85.

Carlson, R. D. (1998). Portfolio assessment of instructional technology. *Journal of Educational Technology Systems*, 27(1), 81–92.

ISTE (2008). *National Educational Technology Standards (NETS•T) and Performance Indicators for Teachers*. Available at

[http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS\\_T\\_Standards\\_Final.pdf](http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS_T_Standards_Final.pdf).

Learning.com: <http://www.learning.com/TLA/index.htm>

Morrison, G.R., & Lowther, D.L. (2010). *Integrating computer technology into the classroom: Skills for the 21st century*, 4th ed. Upper Saddle rivers, NJ: Allyn & Bacon.

NECC: <http://center.uoregon.edu/ISTE/NECC2009/>.

Smaldino, S.E., & Lowther, D.L. (2007). *Instructional technology and media for learning*, 9th ed. Upper Saddle Rivers, NJ: Allyn & Bacon.