Georgia Assessments for the Certification of Educators®

TEST DESIGN AND FRAMEWORK

TEST DESIGN

Computer Skill Competency

The **Computer Skill Competency** assessment consists of **one test**. It contains selected-response questions. The areas of content assessed and the approximate number of selected-response questions in each content area are shown in the table below. Further information regarding the content included in each subarea can be found in the test framework.

Computer Skill Competency (Test Code 178)

Subareas:	Objectives	Approximate Number of Selected-Response Questions
➢ Basic Operations, Concepts, and Issues Related to Computer-Based Technology and Electronic Communication	0001–0003	22
➢ Using Technology-Based Productivity Tools	0004–0006	23
➢ Integrating Technology into the Classroom	0007–0008	15
	TOTAL	**60**

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TEST FRAMEWORK

Computer Skill Competency

BASIC OPERATIONS, CONCEPTS, AND ISSUES RELATED TO COMPUTER-BASED TECHNOLOGY AND ELECTRONIC COMMUNICATION

0001 Understand basic concepts, terminology, operations, and maintenance and care of computer hardware, software, and related peripheral devices.

For example:

- demonstrating knowledge of characteristics, uses, and maintenance and care of hardware, software, peripheral devices, and removable media
- identifying properties of operating systems
- recognizing terminology and concepts related to computers and technology
- demonstrating knowledge of basic computing procedures (e.g., startup and shutdown, login and logout)
- demonstrating knowledge of file management (e.g., opening, closing, copying, saving, and naming files)
- demonstrating knowledge of navigating between drives and applications (e.g., removable media, hard drive, network drive, application software)
- applying basic troubleshooting procedures for identifying and solving hardware and software problems
- using appropriate terminology to articulate problems related to hardware, software, and connectivity

0002 Understand acceptable use policies, issues related to the legal and ethical use of technology, and issues related to the safe and secure use of technology.

For example:

- demonstrating knowledge of acceptable use policies (AUP) for school technology resources
- demonstrating knowledge of privacy issues related to electronic communication with students, parents/guardians, and other school personnel
- demonstrating knowledge of appropriate laws, rules, and policies related to the use of computer-based technology (e.g., intellectual property rights, copyright, software piracy, citing electronic sources, fair use)
- demonstrating knowledge of strategies for protecting computers from viruses and malicious damage by users
- demonstrating knowledge of methods for protecting students from inappropriate information and interactions associated with the use of technology

0003 Understand characteristics and functions of Internet tools for communication and research.

For example:

- recognizing characteristics and functions of electronic communication tools (e.g., e-mail, mailing lists, chat rooms, instant messaging, Weblogs)
- demonstrating knowledge of how to use an e-mail system's address book, organize and archive e-mail messages, and when and how to use attachments in e-mail
- demonstrating familiarity with appropriate online etiquette when communicating electronically
- demonstrating the ability to use a Web browser
- demonstrating knowledge of terminology related to the Internet (e.g., URLs)
- demonstrating knowledge of methods and strategies for using the Internet as an effective research tool (e.g., using appropriate search tools)
- demonstrating knowledge of how to evaluate a Web site and its content for authenticity, reliability, quality, bias, and point of view

USING TECHNOLOGY-BASED PRODUCTIVITY TOOLS

0004 Understand the effective use of word processing software.

For example:

- applying methods for editing text
- applying methods for formatting text and paragraphs
- applying methods for organizing text (e.g., tables, bulleted and numbered lists)
- demonstrating knowledge of creating and working with columns, headers and footers, and other page layout features
- applying knowledge of procedures for saving files in multiple formats for a variety of uses
- demonstrating knowledge of viewing and printing features
- applying knowledge of procedures for inserting graphics, spreadsheets, and hyperlinks into documents

0005 Understand the effective use of presentation software.

For example:

- applying design principles for creating presentations for a variety of audiences
- demonstrating knowledge of the use of templates to create presentations
- demonstrating knowledge of procedures for inserting and resizing objects from other applications (e.g., tables from word processing documents; charts from spreadsheets; sound, video, and pictures)
- demonstrating knowledge of procedures for inserting, editing, and formatting text
- demonstrating knowledge of design principles, methods for formatting, and procedures for adding animations and transition effects
- demonstrating knowledge of methods for organizing a presentation

0006 Understand the effective use of spreadsheet and database software.

For example:

- identifying properties and uses of electronic spreadsheets
- demonstrating knowledge of working with cell contents (e.g., cut, copy, paste) and formatting cells, rows, and columns
- applying methods for filtering and sorting data
- using formulas to perform calculations
- applying methods for creating, formatting, modifying, and positioning diagrams and charts
- applying methods for modifying rows and columns (e.g., inserting, deleting, adjusting height and width) and freezing columns or rows
- demonstrating knowledge of methods for page setup and printing (e.g., adding headers and footers, showing grids when printing)
- demonstrating knowledge of concepts, properties, and uses of databases (e.g., grade books, attendance tracking, student information system)

INTEGRATING TECHNOLOGY INTO THE CLASSROOM

0007 Understand concepts related to the design and management of effective technology-enhanced learning environments.

For example:

- identifying appropriate and relevant technologies (e.g., hardware, software, and peripheral devices) to meet specific curricular objectives
- applying methods and strategies to manage student learning (e.g., rotation strategies, classroom arrangements) and monitor the completion of students' computer-based tasks
- applying effective management strategies that ensure maximum and equitable access to and use of technologies for all students
- demonstrating knowledge of the effective use of software applications to address content standards
- recognizing characteristics and features of a variety of technologies for students with special needs (e.g., voice recognition software, touch screen, expanded keyboard) and demonstrating knowledge of appropriate technologies and software genres that meet individual learning styles and needs

0008 Understand concepts related to the design and implementation of technology-enhanced instruction that addresses the diverse needs of all students.

For example:

- recognizing and evaluating research-based best practices related to the effective use of technology in instruction
- identifying effective applications of interdisciplinary technology-enhanced lessons and projects for a variety of classroom settings and learning styles
- identifying effective applications of technology-enhanced instructional units that require students to analyze, interpret, synthesize, and make predictions based on data and textual information
- demonstrating knowledge of how to introduce technology into a technology-enhanced lesson (e.g., pre-lesson activities that establish how to use the technology)
- applying methods and strategies for assessing student performance on technology-based projects
- demonstrating knowledge in the use of electronic communication tools for effective collaboration (e.g., instant messaging, wikis, podcasts)
- demonstrating knowledge of how to incorporate Internet resources (e.g., collaborative projects, virtual tours) into instructional units
- demonstrating knowledge of methods and strategies for extending learning beyond the classroom (e.g., distance learning, video conferencing)