

QUICK REFERENCE: 12TH GRADE TECHNOLOGY

A. MEDIA AND TECHNOLOGY

Content Standard

Students in Wisconsin will select and use media and technology to access, organize, create, and communicate information for solving problems and constructing new knowledge, products, and systems.

PERFORMANCE STANDARDS

By the end of grade 12 students will:

A.12.1 Use common media and technology terminology and equipment

- identify and define basic on-line and telecommunications terminology or concepts (e.g., bandwidth, satellite dish, distance learning, desktop conferencing, listserv, downlink, teleconference, virtual reality)
- demonstrate proper keyboarding mechanics and touch type accurately (suggested range 30-35 wpm)
- use a camcorder, VCR, multimedia computer, or editing equipment to produce a short video program
- identify common graphic, video, and sound file formats (e.g., JPEG, GIF, MPEG, QUICKTIME, WAV)
- use desktop or video conferencing equipment and systems

A.12.2 Identify and use common media formats

- identify examples of agents, expert systems, or artificial intelligence (e.g., search engine, grammar checker, voice recognition, translators)
- describe the common organizational patterns in different types of print media
- identify and explain the use of common microforms
- demonstrate how to import and export text, graphic, and sound files
- distinguish between an individual productivity program and an integrated software program or applications suite
- edit, import, and export movie or video files

A.12.3 Use a computer and productivity software to organize and create information

- explain terminology and concepts connected with integrated software or an applications suite (e.g., tool palette, bulleted or numbered lists, macros, auto-correct, find-and-replace, stylesheets)
- use an integrated program or applications suite to complete a class assignment
- proofread and edit a document using the spell, thesaurus, and grammar checking functions of a word processing program
- manipulate graphics objects in a word processing program (e.g., select, move, modify, delete, duplicate, arrange)
- use desktop publishing and graphics software to produce page layouts in different formats (e.g., brochure, tri-fold, newsletter)

- analyze data from a database and present conclusions in a document or report
- construct a spreadsheet, enter data into cells, use mathematical functions to manipulate/process data, generate a chart or graph, and interpret the results
- use a computer and graphical organizer software to generate modifiable flow charts, project time lines, organizational charts, or calendars

A.12.4 Use a computer and communications software to access and transmit information

- choose most appropriate search engines and directories to locate specific resources on the Internet or other on-line services
- distinguish between "pull" and "push" or "broadcast" methods of acquiring information from an on-line source
- employ FTP (file transfer protocol) to retrieve and download computer files from a remote computer
- use desktop conferencing, e-mail, or groupware to communicate with others regarding assignments or class projects
- establish access to primary sources and other experts for class reports or projects
- participate in an on-line discussion group or listserv appropriate to a content area
- gather and organize statistical or survey data using e-mail, listservs, or on-line news or discussion groups

A.12.5 Use media and technology to create and present information

- use draw, paint, graphics, or presentation software to visually communicate ideas or concepts
- produce a multimedia program using text, graphics, moving images, and sound
- develop a document or file for inclusion into a website or web page
- participate in a desktop conferencing session to present and share information with others

A.12.6 Evaluate the use of media and technology in a production or presentation

- assess the purpose and effectiveness of a production or presentation
- evaluate the appropriateness and effectiveness of the media and technology used
- determine criteria for judging the delivery, pacing, focus, and technical quality of the production or presentation
- judge how well the production or presentation meets specified criteria
- specify ways to improve future productions or presentations

B. INFORMATION AND INQUIRY

Content Standard

Students in Wisconsin will access, evaluate, and apply information efficiently and effectively from a variety of sources in print, nonprint, and electronic formats to meet personal and academic needs.

PERFORMANCE STANDARDS

By the end of grade 12 students will:

B.12.1 Define the need for information

- state the information problem or question in clear and concise terms
- relate prior knowledge to the problem or question
- develop specific research questions or a thesis statement based on the nature, purpose, and scope of project
- conduct a preliminary search to determine if the research questions or thesis statement is clear and searchable; refine and revise if necessary

B.12.2 Develop information-seeking strategies

- identify a full range of appropriate and available information from local, national, and global sources
- determine and apply evaluative criteria to prioritizing potential sources
- pursue a variety of resources reflecting differing points of view, cultures, and disciplines
- identify and evaluate keywords, concepts, subject headings, and descriptors for each information source
- organize ideas, concepts, and issues in a manner appropriate to the subject and purpose
- develop a plan to obtain needed information using a variety of research and investigative strategies (e.g., interviews, questionnaires, experiments, surveys)

B.12.3 Locate and access information sources

- identify the different classification systems used in local school, public and post-secondary libraries, and resource agencies
- locate information using the classification system and catalog in use at a variety of libraries and resource agencies
- use increasingly complex organizational features of print and electronic resources such as cumulative and cross-database indexes
- use different search strategies for bibliographic citations, abstracts, and full-text resources in electronic formats
- construct effective electronic and manual searches using keywords, phrases, Boolean logic, and limiters
- determine when to use general or specialized print and electronic reference tools
- compare, evaluate, and select appropriate Internet search engines and directories

B.12.4 Evaluate and select information from a variety of print, nonprint, and electronic formats

- select information clearly related to the problem or question
- evaluate information for stereotyping, prejudice, and misrepresentation

- distinguish among fact, opinion, point of view, and inference
- determine if sources are authoritative, valid, reliable, accurate, relevant, and comprehensive
- evaluate graphic images for misleading presentation and manipulated data
- determine authorship for all resources and identify points of agreement and disagreement among sources
- select information in formats and genre most appropriate to content

B.12.5 Record and organize information

- use data-gathering strategies that include summarizing, paraphrasing, comparing, and quoting
- follow standardized notetaking processes and compile bibliographic information in an approved format
- credit sources for all quotations, visuals, major ideas, and specific facts or data using accepted citation formats
- analyze and relate information using a variety of relational techniques (e.g., graphic organizers, database reports, spreadsheet charts, graphs)
- organize information in systematic manner for unity, coherence, clarity, and emphasis
- compile a bibliography in a format stipulated by an accepted manual of style

B.12.6 Interpret and use information to solve the problem or answer the question

- interpret new information to formulate ideas which address the question or problem using comparison, evaluation, inference, and generalization skills
- synthesize new ideas, evidence, and prior knowledge to address the problem or question
- draw conclusions and support them with credible evidence

B.12.7 Communicate the results of research and inquiry in an appropriate format

- determine the audience and purpose for communicating the information
- compare strengths and weaknesses of possible presentation methods and products
- select the most appropriate format for the product or presentation
- develop a product or presentation that utilizes the strengths of the medium and supports the conclusions drawn in the research effort

B.12.8 Evaluate the information product and process

- establish the criteria to be used in judging both the product (or presentation) and the process
- assess how well the research conclusions and product satisfy the defined information need
- critique the process and identify steps which need further study, skill development, or practice
- evaluate how the research question or problem, search strategy, resources, and interpretation could have been expanded or modified

C. INDEPENDENT LEARNING

Content Standard

Students in Wisconsin will apply information and technology skills to issues of personal and academic interest by actively and independently seeking information; demonstrating critical and discriminating reading, listening, and viewing habits; and, striving for personal excellence in learning and career pursuits.

PERFORMANCE STANDARDS

By the end of grade 12 students will:

- C.12.1 Pursue information related to various dimensions of personal well-being and academic success
- identify topics of interest and seek relevant information about them
 - evaluate information for decision-making and personal interest
 - recognize that accurate and complete information is essential to sound decisions in personal, academic, and career pursuits
- C.12.2 Appreciate and derive meaning from literature and other creative expressions of information
- recognize that core lists of classics and recommended titles for precollege reading provide for a well-rounded literary background
 - apply personal criteria for choosing literature and other creative expressions of information
 - relate literature and other creative expressions of information to personal experiences
 - compare and contrast examples of literature and creative expressions of information with other examples of literature and creative expressions of information
- C.12.3 Develop competence and selectivity in reading, listening, and viewing
- choose materials at appropriate developmental levels
 - identify and select materials that reflect diverse perspectives
 - contrast characteristics of common literary forms
 - evaluate how words, images, sounds, and illustrations are constructed to convey specific messages, viewpoints, and values to shape attitudes and influence action

C.12.4 Demonstrate self-motivation and increasing responsibility for their learning

- make decisions about group and classroom projects and learning objectives
- identify topics for independent study to meet individual learning needs and interests
- develop and apply criteria for judging success of learning projects
- establish goals, plans, budgets, and timelines for completing a project
- recognize gaps in personal knowledge and apply strategies for addressing them
- evaluate progress and quality of personal learning
- articulate personal goals in pursuit of individual interests, academic requirements, and career paths

D. THE LEARNING COMMUNITY

Content Standard

Students in Wisconsin will demonstrate the ability to work collaboratively in teams or groups, use information and technology in a responsible manner, respect intellectual property rights, and recognize the importance of intellectual freedom and access to information in a democratic society.

PERFORMANCE STANDARDS

By the end of grade 12 students will:

D.12.1 Participate productively in workgroups or other collaborative learning environments

- collaborate with others to design and develop information products and solutions
- incorporate effective group processes and shared decision-making in project development
- specify and detail workgroup goals and individual and subgroup responsibilities
- finalize workgroup strategies, resources, budget, and timeline
- allocate time for a project based on an inventory of the responsibilities of workgroup members
- complete specific projects within a timeline and budget
- critique completed projects and workgroup processes for future improvement

D.12.2 Use information, media, and technology in a responsible manner

- return all borrowed materials on time
- assess the need for different information policies and user agreements in a variety of settings (e.g., private employer, university, government agency)
- demonstrate use of the Internet and other resources consistent with acceptable use policies
- recognize that using media or technology to defame, libel, or misrepresent another person or group constitutes unacceptable behavior
- identify and define consequences of violations to the school's policies on media and technology use
- recognize the need for privacy of certain data files or documents

D.12.3 Respect intellectual property rights

- explain the difference between copyright and copyright registration
- explain why "fair use" is permitted for educational purposes but not in "for profit" situations
- distinguish among freeware, shareware, and commercial software
- recognize the legal consequences of plagiarism and the need for personal authenticity in their work
- explain conditions under which permission must be obtained for the use of copyrighted materials
- describe how to correspond with authors, publishers, or producers to obtain permission to use copyrighted materials in their work

D.12.4 Recognize the importance of intellectual freedom and access to information in a democratic society

- summarize how the basic principles of democracy relate to intellectual freedom
- distinguish between intellectual freedom as it relates to children versus adults
- investigate a specific censorship situation (e.g., challenge to a book or magazine in a local library)
- recommend strategies for ensuring that others have equitable access to information, media resources, and technology
- project what conditions might result if intellectual freedom were ignored in their own community or in the United States.