

**Industry Sector: Information Technology
Career Pathway: Media Support and Services**

FOUNDATION STANDARDS

1.1 Mathematics

Specific applications of Measurement and Geometry standards (grade seven):

(1.2) Construct and read drawings and models made to scale.

Specific applications of Statistics, Data Analysis, and Probability standards (grade seven):

(1.3) Understand the meaning of, and be able to compute, the minimum, the lower quartile, the median, the upper quartile, and the maximum of a data set.

Specific applications of Mathematical Reasoning standards (grade seven):

(1.3.) Determine when and how to break a problem into simpler parts from the context of the problem.

Specific applications of Probability and Statistics standards (grades eight through twelve):

(8.0) Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots.

1.2 Science

Specific applications of Physics standards (grades nine through twelve):

(1.b) Identify and communicate sources of unavoidable experimental error.

(1.c) Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.

(1.d) Formulate explanations by using logic and evidence.

(1.1) Analyze situations and solve problems that require combining and applying concepts from more than one area of science.

2.0 Communications

2.1 Reading

Specific applications of Reading Comprehension standards (grades nine and ten):

(2.1) Analyze the structure and format of functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.

(2.2) Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents.

(2.3) Generate relevant questions about readings on issues that can be researched.

(2.4) Synthesize the content from several sources or works by a single author dealing with a single issue; paraphrase the ideas and connect them to other sources and related topics to demonstrate comprehension.

(2.6) Demonstrate use of sophisticated learning tools by following technical directions (e.g., those found with graphic calculators and specialized software programs and in access guides to World Wide Web sites on the Internet).

(2.7) Critique the logic of functional documents by examining the sequence of information and procedures in anticipation of possible reader misunderstandings.

2.2 Writing

Specific applications of Writing Strategies and Applications standards (grades eight):

(2.5) Write documents related to career development, including simple business letters and job applications:

a. Present information purposefully and succinctly and meet the needs of the intended audience.

b. Follow the conventional format for the type of document (e.g., letter of inquiry, memorandum).

Specific applications of Writing Strategies and Applications standards (grades nine and ten):

(1.5) Synthesize information from multiple sources and identify complexities and discrepancies

in the information and the different perspectives found in each medium (e.g., almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents).

(1.8) Design and publish documents by using advanced publishing software and graphic programs.

(1.9) Revise writing to improve the logic and coherence of the organization and controlling perspective, the precision of word choice, and the tone by taking into consideration the audience, purpose, and formality of the context.

(2.6) Write technical documents (e.g., a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, minutes of a meeting):

- a. Report information and convey ideas logically and correctly.
- b. Offer detailed and accurate specifications.
- c. Include scenarios, definitions, and examples to aid comprehension (e.g., troubleshooting guide).
- d. Anticipate readers' problems, mistakes, and misunderstandings.

Specific applications of Writing Strategies and Applications standards (grades eleven and twelve):

(1.3) Structure ideas and arguments in a sustained, persuasive, and sophisticated way and support them with precise and relevant examples.

(1.4) Plan and conduct multiple-step information searches by using computer networks and modems.

(1.6) Revise writing for word choice; appropriate organization; consistent point of view; and transitions between paragraphs, passages, and ideas.

(1.8) Integrate databases, graphics, and spreadsheets into word-processed documents.

(2.5) Write job applications and résumés:

- a. Provide clear and purposeful information and address the intended audience appropriately.
- b. Use varied levels, patterns, and types of language to achieve intended effects and aid comprehension.
- c. Modify the tone to fit the purpose and audience.
- d. Follow the conventional style for that type of document (e.g., résumé, memorandum) and use page formats, fonts, and spacing that contribute to the readability and impact of the document.

(2.6) Deliver multimedia presentations:

- a. Combine text, images, and sound and draw information from many sources (e.g., television broadcasts, videos, films, newspapers, magazines, CD-ROMs, the Internet, electronic media-generated images).
- b. Select an appropriate medium for each element of the presentation.
- c. Use the selected media skillfully, editing appropriately and monitoring for quality.
- d. Test the audience's response and revise the presentation accordingly.

2.3 Written and Oral English Language Conventions

Specific applications of English Language Conventions standards (grades nine and ten):

(1.4) Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization.

2.4 Listening and Speaking

Specific applications of Listening and Speaking Strategies and Applications standards (grade seven):

(1.8) Analyze the effect on the viewer of images, text, and sound in electronic journalism; identify the techniques used to achieve the effects in each instance studied.

(grades nine and ten):

(1.7) Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.

(2.3) Apply appropriate interviewing techniques:

- a. Prepare and ask relevant questions.
- b. Make notes of responses.
- c. Use language that conveys maturity, sensitivity, and respect.
- d. Respond correctly and effectively to questions.
- e. Demonstrate knowledge of the subject or organization.
- f. Compile and report responses.
- g. Evaluate the effectiveness of the interview.

(grades eleven and twelve):

(1.3) Interpret and evaluate the various ways in which events are presented and information is communicated by visual image makers (e.g., graphic artists, documentary filmmakers, illustrators, news photographers).

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(1.6) Use logical, ethical, and emotional appeals that enhance a specific tone and purpose.

(1.14) Analyze the techniques used in media messages for a particular audience and evaluate their effectiveness (e.g., Orson Welles' radio broadcast "War of the Worlds").

(2.4) Deliver multimedia presentations:
a. Combine text, images, and sound by incorporating information from a wide range of media, including films, newspapers, magazines, CD-ROMs, online information, television, videos, and electronic media-generated images.
b. Select an appropriate medium for each element of the presentation.
c. Use the selected media skillfully, editing appropriately and monitoring for quality.
d. Test the audience's response and revise the presentation accordingly.

3.0 Career Planning and Management

Students understand how to make effective decisions, use career information, and manage personal career plans:

3.1 Know the personal qualifications, interests, aptitudes, knowledge, and skills necessary to succeed in careers.

3.2 Understand the scope of career opportunities and know the requirements for education, training, and licensure.

3.3 Develop a career plan that is designed to reflect career interests, pathways, and postsecondary options

3.4 Understand the role and function of professional organizations, industry associations, and organized labor in a productive society.

3.5 Understand the past, present, and future trends that affect careers, such as technological developments and societal trends, and the resulting need for lifelong learning.

3.6 Know important strategies for self-promotion in the hiring process, such as job applications, résumé writing, interviewing skills, and preparation of a portfolio.

4.0 Technology

Students know how to use contemporary and emerging technological resources in diverse and

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changing personal, community, and workplace environments:

4.1 Understand past, present, and future technological advances as they relate to a chosen pathway.

4.2 Understand the use of technological resources to gain access to, manipulate, and produce information, products, and services.

4.3 Understand the influence of current and emerging technology on selected segments of the economy.

4.4 Understand effective technologies for Web site development and Internet usage.

4.5 Know procedures for maintaining secure information, preventing loss, and reducing risk.

4.6 Know how technology and the arts are interrelated in the development of presentations and productions.

4.7 Understand how technology can reinforce, enhance, or alter products and performances.

5.0 Problem Solving and Critical Thinking

Students understand how to create alternative solutions by using critical and creative thinking skills, such as logical reasoning, analytical thinking, and problem-solving techniques:

5.1 Apply appropriate problem-solving strategies and critical thinking skills to work-related issues and tasks.

5.2 Understand the systematic problem-solving models that incorporate input, process, outcome, and feedback components.

5.3 Use critical thinking skills to make informed decisions and solve problems.

5.4 Understand how financial systems and tools are used to solve business problems.

5.5 Understand the applications of research and analysis skills to the creation of content.

6.0 Health and Safety

Students understand health and safety policies, procedures, regulations, and practices, including the

use of equipment and handling of hazardous materials:

6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.

6.3 Know how to take responsibility for a safe and healthy work environment.

7.0 Responsibility and Flexibility

Students know the behaviors associated with the demonstration of responsibility and flexibility in personal, workplace, and community settings:

(7.1) Understand the qualities and behaviors that constitute a positive and professional work demeanor.

7.2 Understand the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.

7.3 Understand the need to adapt to varied roles and responsibilities.

7.4 Understand that individual actions can affect the larger community.

7.5 Know the current issues and trends related to the field, distinguishing the different and convergent objectives that drive the industry.

7.6 Understand the value of flexibility in all aspects of the creative process (e.g., nonconforming ideas and concepts) and how flexibility influences business relationships (e.g., employer-client).

8.0 Ethics and Legal Responsibilities

Students understand professional, ethical, and legal behavior consistent with applicable laws, regulations, and organizational norms:

8.2 Understand the concept and application of ethical and legal behavior consistent with workplace standards.

8.3 Understand the role of personal integrity and ethical behavior in the workplace.

8.4 Adhere to the copyright and intellectual property laws and regulations, and use and cite proprietary information appropriately.

9.0 Leadership and Teamwork

Students understand effective leadership styles, key concepts of group dynamics, team and individual decision making, the benefits of workforce diversity, and conflict resolution:

9.1 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace settings.

9.3 Understand how to organize and structure work individually and in teams for effective performance and the attainment of goals.

9.5 Understand how to interact with others in ways that demonstrate respect for individual and cultural differences and for the attitudes and feelings of others.

10.0 Technical Knowledge and Skills

Students understand the essential knowledge and skills common to all pathways in the Information Technology sector:

10.1 Know how to use a variety of business- and industry-standard software and hardware, including major proprietary and open standards.

11.0 Demonstration and Application

Students demonstrate and apply the concepts contained in the foundation and pathway standards.

II. PATHWAY STANDARDS

B. Media Support and Services Pathway

Students in the Media Support and Services Pathway prepare for careers that involve creating, designing, and producing multimedia products and services, including the development of digitally generated or computer-enhanced media used in business.

Organizations of all types and sizes use digital media (e.g., CDs, DVDs, Web sites) to communicate with existing and potential customers. Media support experts can find jobs in organizations doing such work as creating e-business Web sites.

BI.0 Students understand the effective use of tools for media production, development, and project management:

B1.1 Know the basic functions of media design software, such as keyframe animation, two-dimensional design, and three-dimensional design.

**Sequoia Union High School District
CTE Model Curriculum Standards**

B1.2 Use appropriate software to design and produce professional-quality images, documents, and presentations.

B1.3 Analyze the purpose of the media to determine the appropriate file format and level of compression.

B1.4 Analyze media and develop strategies that target the specific needs and desires of the audience.

B1.5 Understand the development and management process of a show (e.g., television programs, musicals, radio programs).

B1.6 Know the basic design elements necessary to produce effective print, video, audio, and Web-based media.

B1.7 Use technical skills (e.g., pagination, printing, folding, cutting, binding) to produce publishable materials.

B2.0 Students understand the effective use of communication software to access and transmit information:

B2.1 Know multiple ways in which to transfer information and resources (e.g., text, data, sound, video, still images) between software programs and systems.

B2.2 Understand the differences between various Internet protocols (e.g., http, ftp, mail to, telnet).

B2.3 Use multiple online search techniques and resources to acquire information.

B2.4 Know the appropriate ways to validate and cite Internet resources.

B3.0 Students understand the use of different types of peripherals and hardware appropriate to media and technology:

B3.1 Understand the appropriate peripherals and hardware needed to achieve maximum productivity for various projects.

B3.2 Know how to identify and integrate various types of peripherals and hardware to meet project requirements.

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B3.3 Use various types of audio and video equipment (e.g., digital cameras, scanners, Web cams, CD and DVD recorders), as appropriate, for different projects.

B3.4 Understand the types of media storage and the use of appropriate and know how to convert data between media and file formats.

B4.0 Students apply technical and interpersonal skills and knowledge to support the user:

B4.1 Use a logical and structured approach to isolate and identify the source of problems and to resolve problems.

B4.2 Know the available resources for identifying and resolving problems.

B4.3 Use technical writing and communication skills to work effectively with diverse groups of people.

B4.4 Understand the principles of a customer-oriented service approach to users.