CAREER CLUSTERS—FOCUSING EDUCATION ON THE FUTURE

Career Cluster Resources for Arts, A/V Technology and Communications

www.careerclusters.org

Table of Contents

Introduction

Section I – Pathway Model

Section II – Cluster Knowledge and Skills

Section III – Pathway Knowledge and Skills

Section IV – O*NET Crosswalk Report

Section V – Cluster Profile and Advisory Committee
Pilot Sites

Section VI – Credentials

Section VII – Validation Overview/ Results

Section VIII – Assessment Protocol
Certification Protocol

Introduction

The States' Career Cluster Initiative

9/01/02

Charles Losh, Ph.D., Project Director

The U.S. Department of Education Office of Vocational and Adult Education (OVAE) has identified 16 career clusters representing career opportunities for the 21st century economy. These clusters will frame student opportunities as they pursue postsecondary education and a wide range of career opportunities from front-line to professional and managerial careers.

Helping students make their dreams become a reality was the driving force behind the nation's Career Clusters initiative launched June 1, 2001. Twelve lead states and the District of Columbia were partners in the development of the tools supporting eleven career clusters which, when combined with the five clusters that have already been developed, will represent all career possibilities.

The National Association of State Directors for Career and Technical Education Consortium (NASDCTEc) and their Board of Directors assumed leadership for coordinating the project. This in itself was unique for a project of this scope. The Board and the State Directors organization believed that this initiative was of such potential impact on the Career Technical delivery system in the country that they needed to play this leadership role in the project, assuring that the materials had utility in their states once completed. Therefore, the NASDCTEc in conjunction with the State of Oklahoma (the project fiscal agent) prepared and submitted a proposal to OVAE in January of 2001. This proposal was funded at a $2.2 million dollar level, with expectations of a second year of funding of $2.5 million. The plan to develop eleven curriculum frameworks was very aggressive, given that each of the prior projects, designed to develop and pilot test materials for a single cluster, had received in excess of $1 million dollars for their multiyear development work.

The project was designed to establish curriculum frameworks and supportive materials for each cluster, with a broad-based advisory committee for each cluster, led by a state. There was also a National Advisory Committee consisting of members from each of the cluster committees, along with other stakeholders. The National and State Cluster advisory committees were responsible for identifying the frameworks, pathway and foundation knowledge and skills, and other supportive

materials. The committees included representatives from states, schools, education and training, business and industry, associations, and others directly impacted by the materials.

The development of materials for each of the eleven clusters was led by a different state, with business and industry at the helm. The lead states included: Idaho and Iowa (jointly leading the Agriculture, Food and Natural Resources cluster), Pennsylvania (Architecture and Construction), Ohio (Marketing, Sales and Service), North Dakota (Finance), West Virginia (Hospitality and Tourism), South Carolina (Business, Management and Administration), Kentucky (Human Services), Arkansas (Law, Public Safety and Security), North Carolina (Science, Technology, Engineering and Mathematics), Michigan (Education and Training), and Oklahoma and the District of Columbia/Washington D.C. (jointly leading the Government and Public Administration cluster).

The five additional career clusters included Health Science led by the State of Utah, Manufacturing led by the State of Indiana, Arts, Audio Video Technology and Communications led by the V-TECS Consortium, Information Technology led by the Educational Development Center, Inc., and Transportation, Distribution and Logistics Cluster led by the State of Illinois. These clusters plan to complete their work by June 30 of 2003.

To facilitate and coordinate the developmental work of the Cluster Initiative, staff was identified and housed at the Oklahoma Department of Career and Technical Education. The staff consisted of four Cluster Coordinators: Marsha Daves, Greg Dewald, Curtis Shumaker, and Pam Stacey. Additionally, Denise Christy provided research and web development support, Lisa Batchelder provided financial support, and Karan Smith provided administrative support.

Development work for the States' Career Clusters Initiative began June 1, 2001, and the first meeting of lead states, OVAE staff, and cluster staff was held in Oklahoma City in mid-June. At this meeting, project objectives, general direction, timelines, and the initial research goals were identified. This work continued through the fall and winter of 2001 and included the identification of cluster advisory committee members, the development of cluster frameworks based on the prototype cluster models provided by V-TECS, and the identification of occupations and draft pathways along with degrees and certificates associated with the career specialties/occupations in each of the clusters.

In January of 2002, the lead state teams were brought together in Phoenix to begin the process of developing knowledge and skill statements for each of the cluster pathways and foundations. Contracted writers and lead state cluster advisory committee members, depending upon

the decisions of cluster leadership, carried out this work. A part-time editor in Oklahoma provided consistency across the cluster knowledge and skill statements. One concern that was addressed early in the process was the need for a "common look and feel" across the clusters. Ultimately, this was accomplished not only for the eleven clusters in the States' Career Clusters Initiative, but also through close cooperative relationships between the projects, all the cluster knowledge and skill statements were developed (or retro-fitted) using the same format. This format includes a knowledge/skill statement with associated performance elements and measurement criteria. This format provides the tools needed for curriculum and assessment developers as they take the materials to the classroom.

The National Advisory Committee met in March of 2002, and reviewed the curriculum frameworks, credentials list, and lead state advisory committee memberships and structures, and forwarded those materials to the Executive Committee for the Project. The Executive Committee, made up of the Board of the NASDCTEc, also met in March, approved the materials and discussed the future actions needed to assure implementation of the cluster materials.

Originally, the project was designed for a minimum of two years and was to include the identification of 110 pilot test sites across the country, along with the development of assessments and certifications for the clusters. The Office of Vocational and Adult Education, however, determined in November of 2001 that the goals of the project were "too broad", and terminated the project as of September 30, 2002.

Development of the products needed for curriculum and assessment was fast-tracked, with the knowledge and skill statements, performance elements and measurement criteria ready for validation by July 15, 2002. This was the result of a major effort of lead state advisory committees and staff responding to the shortened timeline and the need for quality product.

Given the efforts of the developmental teams, cluster advisory committee members were able to review and validate the knowledge and skills and supporting elements. Additionally, a national web-based validation was conducted from July 15 to August 15, 2002. All 50 states were invited to a dissemination meeting held in Charleston, South Carolina Sept 13, 2002, where the materials were distributed to participants for their use in updating their curriculum.

For further information on the status of the materials, go to the web-site, http://www.careerclusters.org/.

Section I – Pathway Model

Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

Sample Career Specialties/Occupations	♦ Video Systems Technicians ♦ Video Graphics, Special Effects, and Animation ♦ Audio-Video Designers and Engineers ♦ Technical Computer Support Technicians, State, Film, Video, and DVD ♦ Audio-Video System Service Technicians ♦ Audio Systems Technicians	♦ Graphics and Printing Equipment Operators ♦ Lithographers and Platemakers ♦ Computer Typography and Composition Equipment Operators ♦ Desktop Publishing Specialists; Web Page Designers	♦ Commercial Photographers, Digital, Still, Video, Film ♦ Interior Designers, Commercial/Residential and Home Furnishings coordinators ♦ Graphic Designers, CAD Technicians, and Fashion Illustrators ♦ Textile Designers ♦ Commercial Artists, Illustrators, and Artists, all Media ♦ Curators and Gallery Managers ♦ Fashion Designers	♦ Production Managers, Digital, Video, Stage ♦ Cinematographers, Film/Video Editors ♦ Dancers ♦ Play Writers, Screen Writers, Screen Editors, Script Writers ♦ Directors and Coaches, Performers, actors, Musicians ♦ Make-Up Artists and Costume Designers ♦ Stagecraft Designers, Lighters, Sets, Sound Effects, Acoustics, Painters ♦ Composers, Conductors, and Music Instructors	♦ Audio/Video Operations, Control Room Technician ♦ Station Managers and Radio & TV Announcers ♦ Publishers, Editors, and Journalists and Reporters, Print, Broadcast, Other ♦ Broadcast Technicians	♦ Telecommunication Technicians ♦ Telecommunication Equipment, Cable, Line Repairers/Installers ♦ Telecommunication Computer Programmers, and Systems Analysts
Pathways	**Audio and Video Technology and Film**	**Printing Technology**	**Visual Arts**	**Performing Arts**	**Journalism and Broadcasting**	**Telecommunications**
Occ. Area	**Occupational Area Knowledge and Skills** ♦ Academic Foundations ♦ Communications ♦ Problem Solving and Critical Thinking ♦ Information Technology Applications ♦ Systems ♦ Safety, Health and Environmental ♦ Leadership and Teamwork ♦ Ethics and Legal Responsibilities ♦ Employability and Career Development ♦ Technical Skills					

Section II – Cluster Knowledge and Skills

Cluster Knowledge and Skill Statement

Academic Foundations

Statement: Apply Language Arts knowledge and skills to this career pathway.

Performance Element: Apply the reading process and strategies to directions or tasks that are relatively short, with limited categories of information, directions, concepts, and vocabulary.

Performance Element: Demonstrate competence in using various information sources, including knowledge bases and technical texts to perform specific tasks.

Performance Element: Demonstrate competence in writing and editing documents, using correct grammar and punctuation.

Performance Element: Demonstrate competence in speaking to provide, distribute, or find information.

Performance Element: Demonstrate competence in making formal and informal oral presentations, including selecting and using media.

Performance Element: Adapt listening strategies to utilize verbal and nonverbal content of communication.

Statement: Apply Mathematics knowledge and skills to this career pathway.

Performance Element: Add, subtract, multiply, and divide mixed numbers, fractions, and decimals.

Performance Element: Mentally add, subtract, multiply, and divide, whole numbers.

Performance Element: Apply basic methods of measurement.

Performance Element: Apply advanced methods of measurement.

Performance Element: Apply advanced concepts of data analysis and distributions.

Performance Element: Apply a variety of strategies within the problem solving process.

Performance Element: Apply measurements for distance.

Performance Element: Apply precision measurements.

Statement: Apply Science knowledge and skills to this career pathway.

Performance Element: Demonstrate the use of common laboratory equipment and procedures.

Performance Element: Explain the environmental impact of materials (solid, liquid, gaseous).

Performance Element: Analyze the effect of chemicals on humans and plants.

Performance Element: Know the forms energy takes, its transformation from one form to another, and its relationship to matter.

Performance Element: Explain color.

Performance Element: Explain the human skeletal system.

Cluster Knowledge and Skill Statement

Performance Element: Explain lenses.

Performance Element: Explain light.

Performance Element: Explain motion, vibrations and waves.

Performance Element: Explain sound.

Performance Element: Apply scientific methods for analysis, data gathering, observation, predictions, and problem identification.

Performance Element: Explain light and ultraviolet rays.

Performance Element: Apply knowledge of computers and information processing.

Cluster Knowledge and Skill Statement

Communications

Statement: Comprehend and use reading strategies to learn meaning, technical concepts and vocabulary.

Performance Element: Determine and use reading strategy (skimming, reading for detail, reading for meaning and critical analysis) to determine purpose of text.

Measurement Criteria: *Use reading strategy to achieve intended purpose.*

Measurement Criteria: *Identify complexity of text.*

Measurement Criteria: *Evaluate and explain relevance, accuracy and appropriateness to purpose.*

Performance Element: Understand content, technical concepts and vocabulary to analyze information and follow directions.

Measurement Criteria: *Identify issues and questions.*

Measurement Criteria: *Analyze information presented in a variety of formats, such as tables, lists, figures, etc.*

Measurement Criteria: *Identify key technical concepts and vocabulary.*

Performance Element: Interpret, transcribe and communicate information, data, and observations to apply information learned from reading to actual practice.

Measurement Criteria: *Interpret technical materials used.*

Measurement Criteria: *Summarize overall meaning of text.*

Measurement Criteria: *Identify strategies for applying information learned to task or new situation.*

Statement: Locate, organize and reference written information from various sources to communicate with co-workers and clients/participants.

Performance Element: Locate written information to communicate with co-workers and clients/participants.

Measurement Criteria: *Conduct search of information on topic using card catalog, keywords, and/or search engines.*

Measurement Criteria: *Locate variety of resources such as books, journals, and electronic forms including the Internet.*

Measurement Criteria: *Select the resources that best relate to the topic.*

Performance Element: Organize information to use in written and oral communications.

Measurement Criteria: *Read and take notes from selected resources.*

Measurement Criteria: *Prepare outline that emphasizes major points with supporting data.*

Measurement Criteria: *Present information in organized, easy-to-follow manner.*

Performance Element: Document the source and proper reference for written information.

Measurement Criteria: *Prepare a bibliography according to MLA, APA, CBE, Chicago, depending on the warranted language style.*

Measurement Criteria: *Use parenthetical, footnotes and endnotes accurately.*

Measurement Criteria: *Follow plagiarism and copyright rules and regulations.*

Statement: Use correct grammar, punctuation and terminology to write and edit documents.

Performance Element: Compose multi-paragraph writing clearly, succinctly, and accurately to write documents.

Cluster Knowledge and Skill Statement

Measurement Criteria: *Organize and arrange information for effective coherence.*

Measurement Criteria: *Report relevant information in order of occurrence.*

Measurement Criteria: *Interpret information, data, and observations correctly.*

Measurement Criteria: *Present main ideas and supporting facts.*

Performance Element: Use description of audience and purpose to prepare written documents.

Measurement Criteria: *Use technical terms and concepts.*

Measurement Criteria: *Incorporate and use references effectively and accurately.*

Measurement Criteria: *Report objective and/or subjective information to achieve the purpose and meet the needs of the audience.*

Performance Element: Use correct grammar, spelling, punctuation and capitalization to prepare written documents.

Measurement Criteria: *Use correct grammar and sentence structure.*

Measurement Criteria: *Use correct spelling.*

Measurement Criteria: *Use correct punctuation and capitalization.*

Statement: Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences.

Performance Element: Prepare oral presentation to provide information for intended purpose and audience.

Measurement Criteria: *Know subject matter well enough to be independent of written aids.*

Measurement Criteria: *Identify characteristics of the audience and adjust to the level of interest and understanding.*

Measurement Criteria: *Use technical terms and concepts correctly.*

Measurement Criteria: *Information is well organized in a logical sequence that makes the major points well understood by the audience.*

Performance Element: Identify and prepare support materials to accompany oral presentation.

Measurement Criteria: *Utilize media and visual aids appropriate to understanding of topic.*

Measurement Criteria: *Prepare easy-to-view visual aids and support materials that are without error.*

Measurement Criteria: *Operate equipment used with support materials smoothly and efficiently.*

Measurement Criteria: *Rehearse presentation.*

Cluster Knowledge and Skill Statement

Performance Element: Deliver presentation to sustain listener's attention and interest.

Measurement Criteria: *Deliver presentation without grammatical error.*

Measurement Criteria: *Speak clearly with appropriate volume, rate and gestures while making and maintaining appropriate eye contact with the audience.*

Measurement Criteria: *Use support materials in the presentation that enhance the understanding of the topic and the interest level of the audience.*

Measurement Criteria: *Stay within presentation time parameters.*

Measurement Criteria: *Use verbal and nonverbal feedback strategies to engage discussion and adjust message and delivery.*

Measurement Criteria: *Respond to questions and comments on presentation.*

Statement: Interpret verbal and nonverbal cues/behaviors to enhance communication with co-workers and clients/participants.

Performance Element: Interpret verbal cues/behaviors to enhance communication.

Measurement Criteria: *Identify verbal cues/behaviors.*

Measurement Criteria: *Observe voice tempo, quality, tone and volume.*

Measurement Criteria: *Explain message conveyed by verbal cues/behaviors.*

Performance Element: Interpret nonverbal cues/behaviors to enhance communication.

Measurement Criteria: *Identify nonverbal cues/behaviors.*

Measurement Criteria: *Observe eye contact, facial expressions, posture, gestures and other body language.*

Measurement Criteria: *Explain message conveyed by nonverbal cues/behaviors.*

Performance Element: Interpret visual communication processes used to convey messages for various audiences through art forms, technology, films, news, print, and productions.

Measurement Criteria: *Interpret visual messages conveyed through various media.*

Measurement Criteria: *Apply knowledge of visual communications to given messages using different forms of media.*

Performance Element: Analyze how meanings are interpreted and influenced through various forms of art, audio-video technology productions, and the media.

Measurement Criteria: *Identify how meanings are interpreted through media, productions, and other art forms.*

Measurement Criteria: *Identify the concerns related to interpretations and how they influence various audiences.*

Performance Element: Interpret the influence elements of time and place on the visual characteristics, content, purposes, and message of works of art.

Measurement Criteria: *Evaluate a visual work of art to determine the time and place of the work, using content, characteristics, and the purpose as criteria.*

Measurement Criteria: *Analyze how visual characteristics, content, and a message convey the time and place of the work of art.*

Statement: Apply active listening skills to obtain and clarify information.

Performance Element: Interpret message/information given to clarify information.

Measurement Criteria: *Indicate familiarity of topic being presented.*

Measurement Criteria: *Respond accordingly using appropriate verbal and nonverbal language.*

Measurement Criteria: *Answer questions correctly and be able to provide feedback in own words.*

Performance Element: Respond with restatement and clarification techniques to clarify information.

Measurement Criteria: *Ask questions to seek or confirm understanding.*

Measurement Criteria: *Paraphrase and/or repeat information.*

Measurement Criteria: *Record notes and summarize information from written notes.*

Statement: Develop and interpret tables, charts, and figures to support written and oral communications.

Performance Element: Develop tables, charts and figures to support written and oral communication.

Measurement Criteria: *Compile facts and arrange in an organized manner for a table, chart or figure.*

Measurement Criteria: *Document sources of data.*

Measurement Criteria: *Determine most appropriate way to display data for effective coherence.*

Measurement Criteria: *Prepare table, chart, graph or figure for inclusion in publication or presentation.*

Performance Element: Interpret tables, charts and figures used to support written and oral communication.

Measurement Criteria: *Evaluate reference or source of data for authenticity and reliability.*

Measurement Criteria: *Explain information presented in tables, charts and figures.*

Measurement Criteria: *Prepare written summary of findings expressed in tables, charts and figures.*

Cluster Knowledge and Skill Statement

Problem Solving and Critical Thinking

Statement: ***Apply decision-making and problem-solving techniques to develop potential solutions to workplace problems.***

Performance Element: Apply the problem-solving method to address workplace issues.

Measurement Criteria: *Define the scientific method of problem-solving.*

Measurement Criteria: *Describe key indicators and ways to first recognize that a problem exists.*

Measurement Criteria: *Identify obstacles, costs, and benefits to solving a given problem.*

Measurement Criteria: *Objectively evaluate the potential solutions for a given problem.*

Measurement Criteria: *Assess each alternative and obstacle to determine potential solutions.*

Measurement Criteria: *Recognize when a new potential solution or additional input is needed.*

Measurement Criteria: *Weigh criticality of the problem and balance with time and effort required to solve it.*

Measurement Criteria: *Recognize what can be independently resolved and what requires input and resources of others.*

Measurement Criteria: *Differentiate between symptoms and cause of a problem.*

Performance Element: Demonstrate brainstorming as a skill to generate new and creative ideas when solving problems with challenging or recurring issues.

Measurement Criteria: *Define the parameters of brainstorming, including limitations like time, distance, and reasonableness.*

Measurement Criteria: *Explain group dynamics that enhance brainstorming results, such as listening to alternatives and external resources.*

Measurement Criteria: *Demonstrate methods to enhance brainstorming results such as including individuals with diverse work experiences and skills, various cultural groups, and icebreakers to motivate innovation.*

Performance Element: Apply critical thinking skills to examine information, analyze challenging issues, and provide creative ideas.

Measurement Criteria: *Analyze information and data from a variety of sources to bring together for use in potential new situations.*

Measurement Criteria: *Distinguish the irrelevant from the relevant when examining information and data for specific situations.*

Measurement Criteria: *Use decision tree and process mapping as problem solving tools.*

Measurement Criteria: *Practice thinking beyond the usual to create new types of solutions.*

Performance Element: Demonstrate how to address issues of conflict and how to resolve them.

Measurement Criteria: *Define areas of conflict that may cause concern in the workplace.*

Measurement Criteria: *Practice addressing issues of conflict in various forms of communication.*

Measurement Criteria: *Demonstrate using problem solving and critical thinking to resolve issues of conflict.*

Cluster Knowledge and Skill Statement

Performance Element: Analyze situations and behaviors that affect conflict management.

Measurement Criteria: *Describe a Win/Win situation.*

Measurement Criteria: *Demonstrate communication for buy-in.*

Measurement Criteria: *Compare results of competitive behavior versus cooperative/collaborative behavior.*

Measurement Criteria: *Practice acting as "devil's advocate" to challenge one's own solutions and identify pitfalls.*

Measurement Criteria: *Practice standing one's ground when the issue is significant.*

Measurement Criteria: *Describe elements of risk versus validation occurring within conflict issues.*

Measurement Criteria: *Demonstrate how to test theories beyond the conceptual.*

Cluster Knowledge and Skill Statement

Information Technology Applications

Statement: Use Personal information Management (PIM)/ Productivity applications.

Performance Element: Manage personal schedule and contact information.

Measurement Criteria: *Create and update a to-do list with due dates, status, category, and priorities.*

Measurement Criteria: *Add, delete, and edit schedules. Use features such as recurring events, multiple-day, and reminders.*

Measurement Criteria: *Group and categorize contact information correctly.*

Performance Element: Create memos and notes.

Measurement Criteria: *Create notes, informal memos, and reminders accurately.*

Statement: Use Electronic Mail applications.

Performance Element: Use email to share files and documents.

Measurement Criteria: *Open (or detach) and save attachments to the intended location.*

Measurement Criteria: *Select appropriate strategy (attachment vs. link) for sharing information.*

Measurement Criteria: *Use appropriate e-mail security measures (e.g., use virus scan to check virus, do not download attachments from unknown sources).*

Performance Element: Use email to communicate within and across organizations.

Measurement Criteria: *Create e-mail messages in accordance with established business standards (e.g., grammar, word usage, spelling, sentence structure, clarity) .*

Measurement Criteria: *Manage mailboxes by deleting and organizing messages.*

Measurement Criteria: *Use e-mail features such as reply requested, return receipt, out-of-office notices.*

Statement: Use Internet Applications.

Performance Element: Access and Navigate Internet (e.g., use a web browser).

Measurement Criteria: *Navigate between and within web sites.*

Measurement Criteria: *Access and use multiple browser windows.*

Measurement Criteria: *Differentiate between secure and non-secure web sites.*

Measurement Criteria: *Download a file from a web site to the desired location.*

Performance Element: Search for information and resources.

Measurement Criteria: *Select search engine(s) appropriate for desired information.*

Measurement Criteria: *Identify and articulate an information search.*

Measurement Criteria: *Use phrase search and simple Boolean logic (AND, OR, NOT, NEAR).*

Measurement Criteria: *Refine search by modifying search terms.*

Performance Element: Evaluate Internet resources.

Measurement Criteria: *Prioritize Internet resources against search criteria.*

Measurement Criteria: *Look for corroboration and independent validation of information (do different sites reference each other, is the information consistent).*

Measurement Criteria: *Take action to clarify ambiguous or incomplete information.*

Statement: Use Writing/Publishing applications.

Cluster Knowledge and Skill Statement

Performance Element: Prepare simple documents and other business communications.

Measurement Criteria: *Create documents (letters, memos, reports) both with and without templates.*

Measurement Criteria: *Format text using basic formatting functions (e.g., paragraph spacing, margins, bullets, numbering).*

Measurement Criteria: *Employ word processing utility tools (e.g., track changes or thesaurus).*

Performance Element: Prepare reports and other business communications, integrating graphics and other non-text elements.

Measurement Criteria: *Use advanced formatting features (headers, footers, page numbering, styles).*

Measurement Criteria: *Customize tables (add borders and shading, merge rows and columns, adjust row/column sizes).*

Measurement Criteria: *Use insert picture/object function to place graphics in document and adjusts text formatting accordingly.*

Measurement Criteria: *Employ document organization tools (e.g., outline, footnotes, and endnotes...).*

Performance Element: Prepare complex publications.

Measurement Criteria: *Make changes to format or layout of an existing complex publication or template (e.g., 8-page, 2-color newsletter with columns, sidebars, photos and graphics, multi-color output...).*

Measurement Criteria: *Organize content and standardize format from various sources.*

Measurement Criteria: *Create non-print output for publication (e.g., PDF, postscript).*

Statement: Use Presentation applications.

Performance Element: Prepare presentations for training, sales and information sharing.

Measurement Criteria: *Create a new presentation using both text and content layouts.*

Measurement Criteria: *Change color scheme for a slide design.*

Measurement Criteria: *Create/edit external graphic elements (e.g., a scanned photo) and insert into a slide.*

Measurement Criteria: *Edit existing animations and action buttons.*

Measurement Criteria: *Create new slide transitions.*

Performance Element: Deliver presentations with supporting materials.

Measurement Criteria: *Create and distribute presentation handouts or speaker notes.*

Measurement Criteria: *Print either key slides or an entire presentation in handout or notes format.*

Measurement Criteria: *Create an automated slide show.*

Statement: Use Spreadsheet applications.

Performance Element: Create spreadsheet.

Measurement Criteria: *Create new spreadsheet, based on a set of data where you must identify the appropriate structure (e.g., rows and columns) for data display and analysis.*

Measurement Criteria: *Apply cell type formatting (e.g., date, dollar, text, decimal) appropriate to data type.*

Measurement Criteria: *Add document identification (e.g., page numbers, dates, and titles in headers and footers).*

Measurement Criteria: *Print only relevant data so that it is readable (e.g., uses set print area to fit into one or multiple pages).*

Performance Element: Perform calculations and analysis on data.

Measurement Criteria: *Write simple formulas.*

Measurement Criteria: *Use chart wizard to create a chart or graph from adjacent selections, with appropriate chart type and labels.*

Measurement Criteria: *Use filter and comparison criteria to find specific values in rows in a list.*

Measurement Criteria: *Build calculations using the formula wizard.*

Statement: Use Database applications.

Performance Element: Manipulate data elements.

Measurement Criteria: *Enter data using a form.*

Measurement Criteria: *Locate/replace data using search and replace functions.*

Measurement Criteria: *Process data using database functions (e.g., structure, format, attributes, relationships, keys).*

Performance Element: Manage, analyze and report on interrelated data elements.

Measurement Criteria: *Search a database table to locate records.*

Measurement Criteria: *Sort data using single- and multiple-field sorts.*

Measurement Criteria: *Perform single- and multiple-table queries (e.g., create, run, save).*

Measurement Criteria: *Print forms, reports, and results of queries.*

Measurement Criteria: *Verify accuracy of output.*

Statement: Use Collaborative/Groupware applications.

Performance Element: Facilitate group work through management of shared schedule and contact information.

Measurement Criteria: *Add, delete, and edit group schedule.*

Measurement Criteria: *Create a meeting request or task assignment.*

Measurement Criteria: *Add or delete contacts in a shared address book.*

Performance Element: Facilitate group work through management of shared files and online information.

Measurement Criteria: *Organize, store and share files in network directories (e.g., copy and delete files, create new folders, move documents between folders).*

Measurement Criteria: *Organize, store, and share files using a document library or database.*

Measurement Criteria: *Organize, store, and share files using web sites (e.g., post messages and upload/download files).*

Performance Element: Facilitate group work through instant messaging or virtual meetings.

Measurement Criteria: *Participate in virtual group discussions and meetings.*

Measurement Criteria: *Send or respond to an instant message from a group list.*

Statement: Use Computer Operations applications.

Performance Element: Manage computer operations.

Cluster Knowledge and Skill Statement

Measurement Criteria: *Install/uninstall an application.*

Measurement Criteria: *Connect ports of the computer to peripherals.*

Measurement Criteria: *Interrupt and restart applications or the computer when they freeze.*

Measurement Criteria: *Configure desktop environment and applications for efficient operation (e.g., create shortcuts, customize monitor size, customize menu bars).*

Measurement Criteria: *Apply basic commands of operating system software.* (e.g., create, rename and delete directories).*

Measurement Criteria: *Employ desktop operating skills.* (e.g., use mouse buttons and keyboard shortcuts).*

Performance Element: Manage file storage.

Measurement Criteria: *Differentiate between files and directories.*

Measurement Criteria: *Use folders or directories with meaningful names to store related files.*

Measurement Criteria: *Backup data periodically to a backup media (CD, disk, etc.) or server.*

Measurement Criteria: *Apply appropriate file and disk management techniques* (e.g., defragment and rearrange files, reinstall backup data).*

Measurement Criteria: *Determine file organization * (e.g., use appropriate directory structures and names).*

Performance Element: Compress or alter files.

Measurement Criteria: *Compress and uncompress files/folders using compression software.*

Measurement Criteria: *Convert file formats* (e.g., convert MSExcel or MSWord format file to Adobe Acrobat (PDF) format).*

Measurement Criteria: *Convert existing files using utilities provided by the software (e.g., update files from older version of an application to be used in the newer version, convert file created by MSWorks to MSWord).*

Statement: Use Computer-based Equipment (containing embedded computers (or processors) used to control electromechanical devices).

Performance Element: Operate computer driven equipment and machines.

Measurement Criteria: *Operate equipment and machine with assistance.*

Measurement Criteria: *Secure needed supplies and resources.*

Measurement Criteria: *Follow power-up and log-on procedures.*

Measurement Criteria: *Interact with/respond to system messages using console device.*

Measurement Criteria: *Run applications/jobs in accordance with processing procedures.*

Measurement Criteria: *Follow log-off and power-down procedure(s).*

Performance Element: Use installation and operation manuals.

Measurement Criteria: *Access needed information using appropriate reference materials.*

Cluster Knowledge and Skill Statement

Performance Element: Troubleshoot computer driven equipment and machines and access support as needed.

Measurement Criteria: *Test system using diagnostic tools/software.*

Measurement Criteria: *Repair/replace malfunctioning hardware.*

Measurement Criteria: *Reinstall software as needed.*

Measurement Criteria: *Recover data and/or files.*

Measurement Criteria: *Restore system to normal operating standards.*

Measurement Criteria: *Complete failure/trouble reports correctly.*

Measurement Criteria: *Access in-house or external support as needed.*

Cluster Knowledge and Skill Statement

Systems

Statement: Analyze the history and evolution of the arts, audio-video technology, and communications to their current place in society and the economy.

Performance Element: Explore the history and impact of the arts and technologies on society.

Measurement Criteria: *Develop a timeline depicting the evolution of art, technology, media, and performance to the present time.*

Measurement Criteria: *Identify when the arts became a valued medium within society and how this influenced the arts.*

Measurement Criteria: *Identify positive and negative impacts of the arts on current society.*

Measurement Criteria: *Identify the beginnings of audio-video and communications technologies as valued media within society.*

Performance Element: Evaluate the influences on the evolution of art, technology, media, and performance.

Measurement Criteria: *Identify the known influences on the evolution of art, technology, media and performance.*

Measurement Criteria: *Identify key factors that have impacted the evolution of the arts, communications, and audio-video technologies.*

Performance Element: Distinguish the differing objectives of the general public and the industries in relation to arts and communications.

Measurement Criteria: *Analyze the objectives of the general public related to arts and communications.*

Measurement Criteria: *Examine the objectives of industries related to arts and communications operations.*

Measurement Criteria: *Interpret the similarities and differences between the objectives of the general public and the industries relating to arts and communications operations.*

Performance Element: Analyze current issues related to the arts, audio-video technologies, telecommunications, printing, and the media.

Measurement Criteria: *Identify the current, key, local and national issues for arts and communications technologies.*

Measurement Criteria: *Compare the similarities and differences in the issues currently affecting arts and communications technologies.*

Measurement Criteria: *Determine how these issues impact each area and the entire career cluster.*

Statement: Examine the organizational structures within this career cluster for diversity and functions.

Performance Element: Exhibit knowledge of the fluid and diverse organizational structures within the arts, audio-video technology, printing, telecommunications, and media industries.

Measurement Criteria: *Explain the formal and informal organizational structures within each of these pathways.*

Measurement Criteria: *Illustrate the organizational structures in charts.*

Measurement Criteria: *Compare the organizational structures of the arts and other pathways for similarities and differences.*

Cluster Knowledge and Skill Statement

Measurement Criteria: *Explain the meaning of diverse organizational structures and why these are important for the accomplishment of joint projects.*

Statement: Analyze the economic base and how this impacts its business practices and society.

Performance Element: Analyze the industry's economic base pertinent to the arts and related technologies.

Measurement Criteria: *Evaluate how the visual and performing arts economically impacts current society.*

Measurement Criteria: *Evaluate how the technology industries economically impact current society.*

Measurement Criteria: *Describe how the arts have economically influenced the inception of the technology industry.*

Measurement Criteria: *Describe how the technologies industry has influenced the economic growth of the arts to the present time.*

Performance Element: Analyze the industry's business practices pertinent to the arts and related technologies.

Measurement Criteria: *Identify the basic business principles relative to the pathways in this career cluster.*

Measurement Criteria: *Examine the business practices amongst the diverse pathways in this career cluster for similarities and differences.*

Performance Element: Evaluate the role of the arts in business, technology, and the community.

Measurement Criteria: *Define the roles of the arts in business, technology, and the community as identified by society.*

Measurement Criteria: *Present the role that business expects from the arts in relation to economic development.*

Measurement Criteria: *Describe the rationale for technical aspects working with the arts and how this provides a mutual benefit.*

Measurement Criteria: *Illustrate roles that the community expects from the arts in relation to quality of life issues.*

Statement: Explore evidence of interdependence of the technical and the artistic sides of this career cluster.

Performance Element: Exhibit knowledge of how technology and the arts are partners in the development of presentations and productions.

Measurement Criteria: *Describe the impact that audio-video technology, printing, broadcasting, and journalism have on the development of presentations and productions.*

Measurement Criteria: *Analyze how technical areas and the arts partner to produce high quality presentations and productions.*

Cluster Knowledge and Skill Statement

Performance Element: Analyze how the roles of creators, performers, technicians, and others involved in production, performance, and media are similar and different from one another.

Measurement Criteria: *Analyze the roles of creators, performers, technicians, and others involved in production, performance, and media to identify similarities and differences.*

Measurement Criteria: *Analyze the skills required by both technical and artistic partners to provide audiences with quality works and productions.*

Measurement Criteria: *Design a presentation that illustrates the similarities and differences of the various roles.*

Statement: Analyze the formal and informal influences in the abstract and formal structures of business organizations within this career cluster.

Performance Element: Examine the influences of government, public opinion, and diverse local and cultural perspectives that may affect visual arts, media communications, or performance as a business.

Measurement Criteria: *Define influences of government and cultural perspectives as they relate to media communications, visual arts or performance as a business.*

Measurement Criteria: *Define the influence of government regulations on media, audio-video productions, telecommunications, printing, and artistic authorship.*

Measurement Criteria: *Analyze a variety of persistent cultural issues and dilemmas within society that commonly affect how cultures are portrayed within art forms and communication.*

Measurement Criteria: *Evaluate how cultural issues and dilemmas within society influence government and public opinion and its effects on developing a successful business.*

Performance Element: Examine labor management processes and agreements generally used in various areas within the arts, audio-video technologies, telecommunications, printing, and the media.

Measurement Criteria: *Define labor management processes and agreements used within each pathway.*

Measurement Criteria: *Identify common labor management processes and agreements used within this career cluster.*

Measurement Criteria: *Role play a labor management process as it relates to one area in each pathway in this career cluster.*

Measurement Criteria: *Identify issues that are handled in agreements between labor and management in one of the pathways for this cluster.*

Cluster Knowledge and Skill Statement

Safety, Health, and Environmental

Statement: Analyze responsibility for developing and maintaining a safe and healthy work environment related to the arts, audio-video technology, and communications.

Performance Element: Examine how the responsibility for health is dependent upon the individual, as opposed to a supervisor or others.

Measurement Criteria: *Examine the situations in this career cluster where individuals work dependently and are responsible for their own heath.*

Measurement Criteria: *Identify the responsibilities an individual has for implementing health practices in relation to electrical and mechanical equipment.*

Measurement Criteria: *Identify the individual's responsibilities for safe and healthful practices when dealing with stage equipment, artist tools, and mechanical equipment.*

Measurement Criteria: *Design a plan for maintaining individual health for work in various pathways within the cluster.*

Performance Element: Illustrate compliance with OSHA safety regulations and practices related to this cluster.

Measurement Criteria: *Define the OSHA safety regulations related to this cluster.*

Measurement Criteria: *Classify critical safety issues and practices identified by OSHA in relation to pathways in this cluster.*

Measurement Criteria: *Demonstrate using safety procedures required in a specific pathway in this cluster.*

Performance Element: Apply MSDS and Hazardous Materials procedures related to handling and disposing of chemicals.

Measurement Criteria: *Analyze health problems that can result from unsafe exposure to chemicals.*

Measurement Criteria: *Demonstrate the use of knowledge and skills for safe and healthful use of chemicals in various processes in the arts, graphic arts, photography, and technical areas of this career cluster.*

Performance Element: Apply Hazardous Materials practices in relation to fire and water hazards, electrical coding, and right to know laws regarding hazards.

Measurement Criteria: *Exhibit knowledge of Hazardous Materials practices.*

Measurement Criteria: *Demonstrate the use of Hazardous Materials practices related to activities in the career cluster.*

Statement: Analyze safety related problems that may result from working with electrical current.

Performance Element: Demonstrate safe work habits and procedures for application of electricity and static discharge in relation to all technologies in the career cluster.

Measurement Criteria: *Exhibit proper grounding techniques.*

Measurement Criteria: *Identify potential electrical hazards on the work site or set.*

Measurement Criteria: *Demonstrate how to apply CPR and first aid in relation to electrical shock.*

Measurement Criteria: *Demonstrate basic procedures for safely working with electricity.*

Statement: Apply safety procedures in operating equipment commonly used within the career pathways of this cluster.

Cluster Knowledge and Skill Statement

Performance Element: Demonstrate the ability to set a ladder safely and use it, both with and without equipment.

Measurement Criteria: *Set a ladder safely, both with and without equipment.*

Performance Element: Examine safety procedures for operating aerial systems, both with and without individuals on the equipment.

Measurement Criteria: *Utilize safety procedures to operate an aerial system without individuals on the equipment.*

Performance Element: Demonstrate safety procedures when involved with heights.

Measurement Criteria: *Demonstrate how to safely climb poles using steps, gaffs, scaffolding, and ladders.*

Performance Element: Examine the safety practices related to printing and graphic arts, telecommunications, performing arts, visual arts, and broadcasting.

Measurement Criteria: *Illustrate the safety practices required in the control room for broadcasting; in a theater with props, sets, costumes, make-up, and lighting; in graphic arts with presses and duplicators; and in telecommunications.*

Statement: Analyze life style choices and preparation for physically demanding work activities related to pathways in this career cluster.

Performance Element: Examine the physical preparation needed to maintain the work activities of pathways in this career cluster.

Measurement Criteria: *Demonstrate a warm-up process to prepare the body for various performing arts.*

Measurement Criteria: *Demonstrate body mechanics that prevent strain on various parts of the body and voice.*

Measurement Criteria: *Illustrate how to recognize stress as a potential safety factor to the body in various movements.*

Measurement Criteria: *Demonstrate ergonomic movements related to artistic performance and technical equipment use.*

Performance Element: Analyze life style choices required to maintain the work activities of the pathways in this career cluster.

Measurement Criteria: *Apply knowledge of nutrition to meet the body's needs to supply the physical activity required by careers in this cluster.*

Measurement Criteria: *Interpret the impact of choices regarding nutrition, stress, exercise, and alternative decisions on an individual's ability to sustain a career in performance.*

Statement: Demonstrate personal safety while on work-related assignments in various locations beyond the business site.

Performance Element: Analyze personal safety practices required for various pathways within this career cluster.

Measurement Criteria: *Determine the personal safety practices required when gathering news where potential health and safety hazards exist.*

Measurement Criteria: *Practice responding to personal safety concerns "on-location," including dangerous wildlife, terrain, extreme weather, or violence.*

Measurement Criteria: *Apply safety rules related to motor vehicles and other equipment.*

Cluster Knowledge and Skill Statement

Performance Element: Examine the safety practices required for working away, "on-location," or in an open environment.

Measurement Criteria: *Demonstrate safety practices for environmental elements specific to "on-location" settings, stage sets, graphic and visual arts development, and field work in journalism, telecommunications, or broadcasting.*

Cluster Knowledge and Skill Statement

Leadership and Teamwork

Statement: Apply leadership knowledge and skills to achieve group goals and consensus.

Performance Element: Analyze leadership in relation to these four character traits: trust, positive attitude, integrity, and willingness to accept key responsibilities in a work situation.

Measurement Criteria: *Analyze leaders in the arts for these four character traits to determine how they strengthen or weaken the leader's business position in this career cluster.*

Measurement Criteria: *Evaluate work situations within this career cluster to identify how these character traits strengthen the ability of individuals to perform the activities of the job.*

Measurement Criteria: *Describe the differences between leadership and management.*

Performance Element: Analyze how leaders contribute ideas; share in building an organization; act as role models to employees by adhering to company policies, procedures, and standards; promote the organization's vision; and mentor others.

Measurement Criteria: *Analyze these five leadership traits that many business leaders in this cluster exhibit and determine how each trait contributed to or hindered the leaders' success.*

Measurement Criteria: *Demonstrate each leadership trait as part of a role-playing situation related to business activities in this cluster.*

Measurement Criteria: *Compare several leaders using the same leadership traits differently, depending upon the situation, the staff, and the ability of the group to work as a team.*

Measurement Criteria: *Practice small acts that set the tone for an office or an organization, such as returning calls and following up on commitments.*

Measurement Criteria: *Recognize which traits/strengths are most appropriate personally at the time.*

Statement: Apply teamwork knowledge and skills to group situations to achieve collective goals.

Performance Element: Demonstrate teamwork skills though working cooperatively with co-workers, supervisory staff, and others, both in and out of the organization, to achieve particular tasks.

Measurement Criteria: *Define working together cooperatively as it relates to various careers in the cluster.*

Measurement Criteria: *Identify the traits, skills, and gaps among individuals on a team, and which are appropriate to the situation.*

Measurement Criteria: *Identify several ways to overcome the barriers to working in teams to complete various types of projects.*

Measurement Criteria: *Demonstrate good and bad examples of teamwork skills in a mock team meeting related to this cluster.*

Measurement Criteria: *Analyze teamwork skills applied in a mock meeting to determine how they contributed to the success of the team using the "half-full, not half-empty" analogy.*

Measurement Criteria: *Identify capabilities to consider in advance as helpful or as future obstacles.*

Cluster Knowledge and Skill Statement

Measurement Criteria: *Determine the correct work to assign to a skill set, including some challenges for growth.*

Measurement Criteria: *Demonstrate ability to accept leadership.*

Measurement Criteria: *Demonstrate ability to accept feedback on personal behavior and use it constructively.*

Performance Element: Demonstrate teamwork processes that provide team building, consensus, continuous improvement, respect for the opinions of others, cooperation, adaptability, and conflict resolution.

Measurement Criteria: *Define teamwork in the workplace within this career cluster.*

Measurement Criteria: *Prioritize a list of expectations that co-workers might have for their team, in order for it to achieve work roles to meet group goals.*

Measurement Criteria: *Research the methods that can be used to build teams, to bring consensus, to continuously improve methods and output, and that can work for the individual also.*

Measurement Criteria: *Demonstrate teamwork processes, including failure analysis, that contribute to team success in a mock situation.*

Measurement Criteria: *Analyze teamwork processes in a situation related to this cluster to determine how they were used successfully.*

Measurement Criteria: *Describe the differences between matrix and hierarchy environments and how to operate in both.*

Measurement Criteria: *Describe the differences between collaboration and cooperation and their relevance.*

Measurement Criteria: *Recognize different work styles such as top down or bottom up.*

Cluster Knowledge and Skill Statement

Ethics and Legal Responsibilities

Statement: Exhibit ethical conduct in writing, creating, printing, broadcasting, and performing.

Performance Element: Analyze ethical principles of decision-making related to clients, customers, fellow workers, and others.

Measurement Criteria: *Define professional code of ethics.*

Measurement Criteria: *Examine the professional code of ethics (e.g., Society of Professional Journalism).*

Measurement Criteria: *Identify consequences of non-ethical decision-making on short and long term reputation.*

Performance Element: Analyze ethical conduct that provides proper credit to those whose ideas and content have been used.

Measurement Criteria: *Illustrate how credit is given for use of copyright materials.*

Measurement Criteria: *Identify the consequences in historical examples of both ethical and unethical conduct related to the use of intellectual property.*

Measurement Criteria: *Identify current concerns about consumer ethics related to the music and the video industries.*

Measurement Criteria: *Identify ethical and unethical conduct in a given work situation.*

Performance Element: Analyze ethical standards that apply to the delivery of quality performance and products.

Measurement Criteria: *Define ethical standards.*

Measurement Criteria: *Examine the problems related to maintaining ethical standards in situations without a clear standard.*

Performance Element: Identify ethics involved in the degree of influence media, arts, and performance have upon individuals.

Measurement Criteria: *Identify the degree of influence of print, broadcast media, arts, and performance in a given situation.*

Measurement Criteria: *Evaluate historic political events and actions instigated through the use of media, print, art, and performance.*

Measurement Criteria: *Describe why responsibility for ethical influence is a key issue related to this cluster.*

Performance Element: Identify the proper use of proprietary information.

Measurement Criteria: *Define proprietary information.*

Measurement Criteria: *Describe how proprietary information is a concern related to careers in this cluster.*

Measurement Criteria: *Evaluate situations to judge the extent to which information is proprietary and whether or not it can be used.*

Statement: Apply knowledge of laws affecting this career cluster.

Performance Element: Analyze the copyright laws in relation to seeking formal permission to use materials.

Measurement Criteria: *Identify steps for securing permission to use copyrighted materials.*

Measurement Criteria: *Exhibit how credit is given for use of copyrighted materials.*

Measurement Criteria: *Define what is original content and when credit does not need to be given.*

Measurement Criteria: *Identify the benefits of copyright laws.*

Cluster Knowledge and Skill Statement

Measurement Criteria: *Identify consequences if formal permission is not secured.*

Performance Element: Analyze contracts for potential work in career pathways within this cluster.

Measurement Criteria: *Examine different types of contracts.*

Measurement Criteria: *Interpret various types of contracts.*

Measurement Criteria: *Identify essential elements a contract needs to contain for protection of both parties.*

Performance Element: Analyze state, county, and city codes related to decisions affecting work in this cluster.

Measurement Criteria: *Identify processes required to obtain local, county, and state permits for building structures and sets, and installing communications mechanisms in various site locations.*

Measurement Criteria: *Describe relevant statutes for this cluster.*

Measurement Criteria: *Identify agencies and organizations that oversee and enforce these statutes.*

Measurement Criteria: *Identify assistance professional organizations offer for securing permits.*

Performance Element: Analyze the First Amendment, FCC, the Freedom of Information Act, liable laws, and other regulations for compliance issues relevant to this cluster.

Measurement Criteria: *Describe the intent and relationship of the First Amendment to this cluster.*

Measurement Criteria: *Identify FCC Regulations, the Freedom of Information Act, and state statutes and liability laws pertaining to work in this cluster.*

Measurement Criteria: *Identify court cases related to this cluster that preserve business and individual rights.*

Measurement Criteria: *Interpret how The Freedom of Information Act affects workers in this cluster.*

Measurement Criteria: *Illustrate instances when the intent of the First Amendment was preserved in recent times.*

Performance Element: Analyze the liabilities associated with productions and performances, media, and telecommunications installations.

Measurement Criteria: *Define the term liabilities.*

Measurement Criteria: *Identify examples of potential situations that could pose legal liabilities.*

Measurement Criteria: *Analyze the risk level for work situations related to this cluster.*

Cluster Knowledge and Skill Statement

Employability and Career Development

Statement: Explain written organizational policies, rules and procedures to help employees perform their jobs.

Performance Element: Locate appropriate information on organizational policies in handbooks and manuals.

Measurement Criteria: *Identify the contents of various organizational publications.*

Measurement Criteria: *Select the appropriate document (s) as reference for the situation.*

Performance Element: Discuss how specific organizational policies and rules influence a specific work situation.

Measurement Criteria: *Locate and identify specific organizational policy, rule or procedure to assist with a given situation.*

Measurement Criteria: *Explain specific organizational policy, rule or procedure to improve a given situation.*

Statement: Identify and demonstrate positive work behaviors and personal qualities.

Performance Element: Demonstrate self-discipline, self-worth, positive attitude, and integrity in a work situation.

Measurement Criteria: *Identify the value of maintaining regular attendance.*

Measurement Criteria: *Identify and follow company dress and appearance standards.*

Measurement Criteria: *Explain ways to exhibit pride in work.*

Performance Element: Demonstrate flexibility and willingness to learn new knowledge and skills.

Measurement Criteria: *Exhibit ability to handle stress in a given situation.*

Measurement Criteria: *Display initiative and open-mindedness in accomplishing a work challenge.*

Measurement Criteria: *Participate in company orientation and training programs with enthusiasm.*

Measurement Criteria: *Complete all tasks thoroughly and identify strategies for accomplishing job.*

Performance Element: Exhibit commitment to the organization.

Measurement Criteria: *Follow established rules, regulations and policies to handle situation.*

Measurement Criteria: *Compare the role of the employer or manager and the role of the employee in the flow of work.*

Measurement Criteria: *Describe examples of practicing cost effectiveness.*

Measurement Criteria: *Demonstrate time management by prioritizing work to meet deadlines.*

Performance Element: Identify how work varies with regard to site, from indoor confined spaces to outdoor areas, including aerial space and a variety of climatic and physical conditions.

Measurement Criteria: *Identify how environments impact work related to this cluster.*

Measurement Criteria: *Identify the special knowledge and skills required to work in a variety of climatic and physical situations related to this cluster.*

Cluster Knowledge and Skill Statement

Performance Element: Apply communication strategies to adapt to a culturally diverse environment.

Measurement Criteria: *Recognize and adapt to language barriers, ethnicity, and gender in a workplace context.*

Performance Element: Manage resources in relation to the position.

Measurement Criteria: *Apply time allocation methods to accomplish required tasks.*

Measurement Criteria: *Apply skills for allocating money, individuals, equipment, and other resources to complete tasks.*

Statement: Identify and explore career opportunities in one or more career pathways.

Performance Element: Locate and identify career opportunities that appeal to personal career goals.

Measurement Criteria: *Locate and interpret career information for at least one career cluster.*

Measurement Criteria: *Identify job requirements for career pathways.*

Measurement Criteria: *Identify educational and credentialing requirements for career cluster and pathways.*

Performance Element: Match personal interests and aptitudes to selected careers.

Measurement Criteria: *Identify personal interests and aptitudes.*

Measurement Criteria: *Identify job requirements and characteristics of selected careers.*

Measurement Criteria: *Compare personal interests and aptitudes with job requirements and characteristics of career selected.*

Measurement Criteria: *Modify career goals based on results of personal interests and aptitudes with career requirements and characteristics.*

Statement: Develop a personal career plan to meet career goals and objectives.

Performance Element: Develop career goal and objectives to plan future career direction.

Measurement Criteria: *Identify career that matches individual interests and aptitudes.*

Measurement Criteria: *Develop realistic career goal with an appropriate time frame.*

Measurement Criteria: *Identify realistic objectives for reaching and advancing in career within the estimated timeline.*

Performance Element: Develop strategies to reach career objectives.

Measurement Criteria: *Develop a list of strategies for achieving educational requirements for selected career.*

Measurement Criteria: *Identify multiple strategies for obtaining employment experiences.*

Measurement Criteria: *Identify alternative career goals and objectives and make adjustments in plan to achieve alternate goal.*

Statement: Demonstrate ability to seek and apply for employment.

Performance Element: Use multiple resources to locate job opportunities.

Measurement Criteria: *Identify resources for finding employment.*

Measurement Criteria: *Analyze resources to determine those that are most appropriate for desired career.*

Measurement Criteria: *Compare job requirements with personal qualifications, interests, and aptitudes.*

Measurement Criteria: *Select job that matches personal qualifications, interests, and aptitudes.*

Performance Element: Prepare a resume and letter of application to apply.

Measurement Criteria: *Identify respective employer's submission requirements.*

Measurement Criteria: *Gather information and prepare resume in correct format.*

Measurement Criteria: *Write letter of application for specific job opening in correct format without error.*

Performance Element: Complete an employment application to obtain employment.

Measurement Criteria: *Gather information for application.*

Measurement Criteria: *Complete all questions on application with appropriate and honest answers.*

Measurement Criteria: *Sign and date application.*

Measurement Criteria: *Attach any supporting material required or requested*

Performance Element: Interview to obtain employment.

Measurement Criteria: *Dress appropriately for interview.*

Measurement Criteria: *Exhibit professional conduct before, during and after interview.*

Measurement Criteria: *Explain your qualifications and interests clearly and concisely.*

Measurement Criteria: *Answer all questions honestly and concisely.*

Measurement Criteria: *Write follow-up letter after the interview.*

Statement: Demonstrate ability to evaluate and compare employment opportunities and accept employment.

Performance Element: Evaluate and compare employment opportunity to individual needs and career plan.

Measurement Criteria: *Identify job advantages and disadvantages.*

Measurement Criteria: *Compare job benefits to individual needs.*

Measurement Criteria: *Compare job opportunities and responsibilities to career plan.*

Performance Element: Accept or reject employment.

Measurement Criteria: *Make decision to accept or reject employment based on facts.*

Measurement Criteria: *Write acceptance or rejection letter without error.*

Measurement Criteria: *Complete employment forms upon acceptance without error.*

Cluster Knowledge and Skill Statement

Technical Skills

Statement: Demonstrate the use of technical knowledge and skills that relate to pathways in this cluster.

Performance Element: Identify how various pathways within this cluster work together to generate productions, media, and other activities.

Measurement Criteria: *Identify work activities associated with a variety of the cluster pathways required for a theater production, film, television broadcast, or arts event.*

Measurement Criteria: *Generate a production, media, or other event, and identify the interrelated activities and skill requirements associated with various pathways in this cluster.*

Performance Element: Identify pathways with common knowledge and skills that provide a worker with the potential for mobility.

Measurement Criteria: *Compare the pathways for common knowledge and skills, and produce a crosswalk of related career potential.*

Measurement Criteria: *Identify the pathways with the most discrete knowledge and skills, and compare the potential for career crosswalks.*

Statement: Demonstrate knowledge of the systems within various pathways in this cluster.

Performance Element: Analyze the technological systems that are apparent within the various pathways in this cluster.

Measurement Criteria: *Compare the organizational structures of businesses in each of the pathways in this cluster.*

Measurement Criteria: *Identify the technological systems and their effects on the pathways in this cluster.*

Measurement Criteria: *Predict and highlight technological advancements for several pathways to illustrate the effect on work in careers in this cluster.*

Performance Element: Research the impact of potential new technology advancements related to this cluster in the future.

Measurement Criteria: *Develop a research paper, media production, or other event to demonstrate the impact of technology on careers in this cluster for the future.*

Measurement Criteria: *Evaluate the business opportunities in this cluster and identify how these will be impacted by technological advancements and systems.*

Measurement Criteria: *Identify the technological changes in the past five years that have affected the skill requirements for workers in this cluster.*

Section III – Pathway Knowledge and Skills

PATHWAY: Audio and Video Technology and Film

Pathway Topic: Audio and Visual Technology and Film Pathway

Pathway KS Statement: Explore career opportunities in Audio and Video Technology and Film.

Performance Element: Exhibit knowledge of the history of film and how it is specifically related to the industry today.

Measurement Criteria: *Discuss the beginnings and evolution of audio and video production, and film.*

Measurement Criteria: *Describe how increasingly available technology is changing the audio and video, and film industries.*

Performance Element: Analyze various careers and their job descriptions in audio and video technology, and film.

Measurement Criteria: *Discuss the responsibilities of producers, including budgets, schedules, personnel, and tracking progress.*

Measurement Criteria: *Describe the responsibilities of directors, including knowledge of story structure, script analysis, the relationship to the production team, and the responsibilities of crewmembers.*

Measurement Criteria: *Describe the duties of editors for audio, video, and film productions.*

Measurement Criteria: *Discuss the duties of editors related to audio and visual effects.*

Measurement Criteria: *Describe various jobs associated with animation, including communications, video, and feature-length productions; and Internet streaming.*

Measurement Criteria: *Discuss the responsibilities of others in this field, including lighting directors, cinematographers, videographers, sound engineers, stunt coordinators, special effects coordinators, productions specialists, and other crewmembers.*

Performance Element: Define the terminology associated with audio and video technology, and film production.

Measurement Criteria: *Define commonly used audio production terminology.*

Measurement Criteria: *Define commonly used video production terminology.*

Measurement Criteria: *Define commonly used film production terminology.*

Performance Element: Comprehend value of a broad general knowledge of fine arts, and cultural and regional diversity.

Measurement Criteria: *Identify various types of audio and visual approaches that convey information or create an emotional impact.*

Measurement Criteria: *Explain how knowledge is useful in dealing with projects covering a broad spectrum of events, regions, or cultures when research may not be possible.*

Pathway KS Statement: Apply knowledge of equipment and skills related to audio production.

Performance Element: Comprehend the types of microphones, pick-up patterns, and techniques required for a variety of audio presentations.

Measurement Criteria: *Identify microphones used for audio-video productions, music, and theater.*

Pathway Topic: Audio and Visual Technology and Film Pathway

Measurement Criteria: *Explain why audio pick-up differs in various types of microphones.*

Measurement Criteria: *Describe the techniques to maximize sound performance using various audio formats.*

Performance Element: Apply knowledge of audio equipment for productions, including basic recording equipment, equalizers, mixing consoles, and quality-monitoring equipment.

Measurement Criteria: *Identify basic recording session equipment.*

Measurement Criteria: *Select equipment required for specific types of audio productions.*

Measurement Criteria: *Describe how an audio mixing console, quality-monitoring equipment, and basic recording session equipment are utilized.*

Measurement Criteria: *Demonstrate techniques used for equalization.*

Measurement Criteria: *Demonstrate how to record and mix audio.*

Performance Element: Exhibit knowledge of analog and digital audio formats.

Measurement Criteria: *Distinguish between analog and digital audio formats.*

Measurement Criteria: *Describe the difference in data signals and equipment for analog and digital technology.*

Performance Element: Illustrate the techniques required for synchronization of an audio with video and multiple sound tracks.

Measurement Criteria: *Describe synchronization processes.*

Measurement Criteria: *Demonstrate how audio is synchronized with other audio or video.*

Performance Element: Demonstrate writing audio scripts for various types of programs.

Measurement Criteria: *Identify the key elements required in audio scripts.*

Measurement Criteria: *Explain how various styles of music can create a specific emotional impact.*

Measurement Criteria: *Apply writing skills to the development of a short audio script.*

Pathway KS Statement: Apply knowledge of equipment and skills related to video production.

Performance Element: Apply knowledge of lighting requirements for a planned production.

Measurement Criteria: *Identify types and placement of lighting fixtures for various lighting effects.*

Measurement Criteria: *Demonstrate lighting techniques used for portable and studio productions.*

Measurement Criteria: *Demonstrate operation of a master lighting panel and dimmer panel board.*

Performance Element: Apply knowledge of analog and digital video formats.

Measurement Criteria: *Distinguish between analog and digital video formats.*

Measurement Criteria: *Describe the difference in data signals and equipment for analog and digital technology.*

Performance Element: Demonstrate operation and maintenance of video systems.

Pathway Topic: Audio and Visual Technology and Film Pathway

Measurement Criteria: *Describe the Beta SP ½ inch operating system.*

Measurement Criteria: *Describe Mini DV, non-linear memory devices, and HDTV.*

Measurement Criteria: *Demonstrate operation of video cameras and switchers.*

Measurement Criteria: *Demonstrate how to clean, tune, and align video equipment.*

Performance Element: Demonstrate camera operations, video signals, and video formats.

Measurement Criteria: *Describe how to frame and maintain picture composition.*

Measurement Criteria: *Demonstrate focusing and adjusting images, and performing pans and zooms.*

Measurement Criteria: *Interpret video signals and production formats.*

Performance Element: Exhibit knowledge of computer-based development of video production and editing, with an emphasis on digital technology.

Measurement Criteria: *Define terms associated with computer-based production, including motion video: AVI, Quicktime and MPEG; and stills: JPEG and TIFF.*

Measurement Criteria: *Identify types of software used in the development of video files and animations.*

Measurement Criteria: *Demonstrate how to use software for developing a simple video.*

Measurement Criteria: *Demonstrate using software to edit a video.*

Pathway KS Statement: Exhibit knowledge of editing audio and video productions.

Performance Element: Identify the basic functions and resources for editing.

Measurement Criteria: *Define editing related to audio and video productions.*

Measurement Criteria: *Describe the differences between offline and online editing related to low- and high-resolution input, respectively.*

Measurement Criteria: *Identify editing skills related to various delivery requirements, including commercial broadcast and other forms of distribution.*

Measurement Criteria: *Describe the significance of digital technology and high definition production, and the required equipment related to editing.*

Performance Element: Apply knowledge of basic editing to both linear and nonlinear systems.

Measurement Criteria: *Describe linear and nonlinear systems.*

Measurement Criteria: *Demonstrate skills required for editing using these systems.*

Performance Element: Apply knowledge of control peripherals used for editing.

Measurement Criteria: *Describe various digital platforms such as, high definition, DVC Pro, and Digital Beta.*

Pathway KS Statement: Demonstrate technical production support for audio, video, and film presentations.

Performance Element: Demonstrate repairing and servicing transmitting and receiving systems.

Measurement Criteria: *Describe the need for temperature stability.*

Pathway Topic: Audio and Visual Technology and Film Pathway

Measurement Criteria: *Describe the connection between receiver sensitivity and measurement of image rejection.*

Measurement Criteria: *Demonstrate how to align the receivers and transceivers for operation.*

Measurement Criteria: *Demonstrate basic preventative maintenance.*

Performance Element: Apply knowledge of wireless and wired transmission systems.

Measurement Criteria: *Define wireless system components.*

Measurement Criteria: *Define wired system components.*

Measurement Criteria: *Describe how to repair transmitting and receiving, and multi-channel systems.*

Performance Element: Demonstrate installation of cabling for audio and video productions.

Measurement Criteria: *Demonstrate reading a signal flow diagram to determine cabling route.*

Measurement Criteria: *Demonstrate pulling and securing cable.*

Measurement Criteria: *Demonstrate how to document the routing.*

Performance Element: Demonstrate the installation of a wireless audio-video system.

Measurement Criteria: *Identify how to determine if the power supply is adequate.*

Measurement Criteria: *Demonstrate placement of a wireless audio system for efficient operation.*

Measurement Criteria: *Describe a scenario that requires building support structures and tie-downs.*

Performance Element: Demonstrate how to troubleshoot audio-video system operations.

Measurement Criteria: *Identify the sequence required for troubleshooting.*

Measurement Criteria: *Conduct a troubleshooting sequence.*

Measurement Criteria: *Identify problems and potential solutions.*

Pathway KS Statement: Exhibit the knowledge and skills required to design a production for audio- video presentation.

Performance Element: Apply knowledge of the critical elements in designing a production throughout the stages of pre-production, production, and postproduction.

Measurement Criteria: *Create a short script and identify the resources needed to begin the production.*

Measurement Criteria: *Identify the activities associated with pre-production, production, and postproduction.*

Measurement Criteria: *Analyze the script and storyboard development processes for a successful production.*

Measurement Criteria: *Identify the linkage from each stage to the next in processes and activities.*

Measurement Criteria: *Identify the team roles required for completion of a production.*

Measurement Criteria: *Identify equipment, crew, and cast requirements for a short, scripted audio-video.*

Measurement Criteria: *Identify several means to work within budget restraints.*

Measurement Criteria: *Conduct a casting day for the script.*

Pathway Topic: Audio and Visual Technology and Film Pathway

Measurement Criteria: *Execute production of the script.*

Measurement Criteria: *Critique a production to determine how the various elements resulted in a successful or unsuccessful presentation.*

PATHWAY: Journalism and Broadcasting

Pathway Topic: Journalism and Broadcasting Pathway

Pathway KS Statement: Explore career opportunities in Journalism and Broadcasting.

Performance Element: Analyze various careers and their job descriptions in media companies, including radio and television stations, newspapers and newsmagazines, video production houses, and Internet news outlets.

Measurement Criteria: *Discuss the responsibilities of newspaper, television, and radio reporters.*

Measurement Criteria: *Identify the responsibilities of producers for broadcast media.*

Measurement Criteria: *Describe the duties of editors for various media.*

Measurement Criteria: *Identify specific jobs within a video production company.*

Measurement Criteria: *Describe the duties of photojournalists for various media.*

Measurement Criteria: *Discuss the duties of graphic artists for various media.*

Performance Element: Exhibit knowledge of the history of journalism and broadcasting, and their roles in society, specifically related to journalism and broadcasting today.

Measurement Criteria: *Discuss the beginnings and evolution of broadcasting, and print and electronic journalism.*

Measurement Criteria: *Describe how increasingly available information is changing society.*

Performance Element: Distinguish between different forms of media and their specific applications.

Measurement Criteria: *Describe the differences amongst media, including newspaper, newsmagazine, electronic news, television, and radio.*

Measurement Criteria: *Describe the objectives, distribution, and timeliness of various media.*

Performance Element: Comprehend the value for journalism and broadcasting of a broad general knowledge base; and awareness of cultural, regional, and diversity issues.

Measurement Criteria: *Identify useful knowledge for a reporter writing stories about the economy, a current ethnic art exhibit, and a new piece of military equipment.*

Measurement Criteria: *Explain how knowledge is useful in the broad coverage of events when research may not be possible.*

Pathway KS Statement: Demonstrate writing processes used for various journalism media.

Performance Element: Define the terminology associated with journalism.

Measurement Criteria: *Define commonly used print journalism terms.*

Performance Element: Demonstrate how to cultivate sources for stories.

Measurement Criteria: *Develop a story based on information found on an assigned beat or in other media.*

Measurement Criteria: *Explain how to establish an investigative lead.*

Measurement Criteria: *Evaluate how a community calendar of events, police and fire communications, wire services, and verifiable Internet sources*

Pathway Topic: Journalism and Broadcasting Pathway

are useful for news writing.

Performance Element: Demonstrate how to obtain information to use in writing a story.

Measurement Criteria: *Define off-the-record information.*

Measurement Criteria: *Identify uses of the newspaper morgue and public records.*

Measurement Criteria: *Demonstrate methods for verification of information.*

Performance Element: Develop written stories for print and broadcast.

Measurement Criteria: *Identify two commonly used style guides.*

Measurement Criteria: *Write a print news story to meet a deadline, using organized research, note-taking skills to capture precise language of sources for direct quotations, transitions, and proofreading and copy-editing skills.*

Measurement Criteria: *Discuss content editing.*

Measurement Criteria: *Rewrite a print news story to be used for broadcast.*

Performance Element: Demonstrate how photographs support the development of stories.

Measurement Criteria: *Write two stories about the same event: one with a photograph and one without a photograph.*

Performance Element: Apply knowledge of the similarities and differences amongst editorial, feature, and news writing styles.

Measurement Criteria: *Write a feature article for a news magazine.*

Measurement Criteria: *Identify editorials and columns.*

Pathway KS Statement: Demonstrate writing processes for broadcast media.

Performance Element: Define the terminology associated with television broadcasting.

Measurement Criteria: *Define commonly used television terminology.*

Performance Element: Analyze how to develop a complete television project.

Measurement Criteria: *Write several stories in an appropriate broadcast style, choose one to become a lead story, and prioritize others.*

Measurement Criteria: *Select graphics for stories.*

Measurement Criteria: *Write lead ins and teasers for television.*

Performance Element: Analyze how to develop a complete radio project.

Measurement Criteria: *Write a script for a radio broadcast.*

Measurement Criteria: *Write to a sound bite.*

Measurement Criteria: *Develop lead ins and teasers for radio.*

Measurement Criteria: *Edit stories.*

Pathway KS Statement: Demonstrate the ability to plan and deliver a broadcast production.

Performance Element: Analyze the elements of a newscast production.

Measurement Criteria: *Identify location, number of cameras needed, and time restrictions for a newscast production.*

Measurement Criteria: *Describe the purposes of rundown sheets.*

Measurement Criteria: *Develop a rundown sheet for use with a broadcast.*

Pathway Topic: Journalism and Broadcasting Pathway

Performance Element: Analyze announcing competence.

Measurement Criteria: *Identify announcing techniques required for a specific format.*

Measurement Criteria: *Read aloud a news story.*

Measurement Criteria: *Practice clear delivery of news and other information using cueing devices, written scripts, and a TelePrompTer.*

Measurement Criteria: *Practice script delivery skills for on- and off-camera, including emphasis, professional language, clarity, intonation, enunciation, poise, eye contact, projection, and extemporaneous speaking skills.*

Performance Element: Identify wardrobe suitable for on-camera appearances.

Measurement Criteria: *Select from magazines potential wardrobe for on-camera appearances.*

Performance Element: Analyze production functions.

Measurement Criteria: *Discuss demographics and audience rating standards.*

Measurement Criteria: *Describe targeting content for audiences.*

Measurement Criteria: *Discuss sweeps, ratings, demographics, and survey research methods.*

Performance Element: Demonstrate promoting productions.

Measurement Criteria: *Discuss various promotions activities, including image, cross promoting with other programs and features, contests, broadcasts from remote locations, public appearances, involvement in community activities, and Internet activities.*

Measurement Criteria: *Develop a production promotion involving several activities discussed.*

Performance Element: Analyze how image capturing and graphics design support the development of electronic presentations.

Measurement Criteria: *Develop two productions on the same topic: one including captured images and graphic design and one excluding images and graphic design.*

Performance Element: Distinguish amongst various musical radio formats.

Measurement Criteria: *Identify rock, jazz, classical, folk, and nostalgic music and their music genres.*

Measurement Criteria: *Identify trade magazines associated with radio.*

Pathway KS Statement: Demonstrate knowledge and understanding of technical support related to broadcasting.

Performance Element: Examine equipment and its function.

Measurement Criteria: *Operate audio recording and editing equipment.*

Measurement Criteria: *Operate image recording and editing equipment.*

Performance Element: Examine production activities.

Measurement Criteria: *Demonstrate set-up and striking equipment, as specified by a production design.*

Measurement Criteria: *Coordinate video and audio equipment, as specified by a production design.*

Pathway Topic: Journalism and Broadcasting Pathway

Measurement Criteria: *Implement a schedule, as specified by a production design.*

Performance Element: Apply knowledge of running a board shift.

Measurement Criteria: *Demonstrate the use of a crosscheck cue sheet, daily log, and program.*

Measurement Criteria: *Locate and load programs and commercials, control on-air sound quality, and check audio quality.*

Measurement Criteria: *Perform time checks and meet broadcast deadlines.*

Measurement Criteria: *Record network feeds.*

Measurement Criteria: *Discuss the importance of operating a control board with no interruption in audio.*

Measurement Criteria: *Operate a tight board.*

Measurement Criteria: *Discuss the Emergency Alert System.*

Performance Element: Examine set design.

Measurement Criteria: *Develop a set plan, including lighting, props, and atmosphere.*

Pathway KS Statement: Exhibit knowledge of business issues related to journalism and broadcasting.

Performance Element: Analyze the business and economic factors that influence programming, content, and distribution.

Measurement Criteria: *Identify similarities and differences amongst public and commercial radio and television station operations.*

Measurement Criteria: *Identify several types of advertising, marketing, and public relations activities used by public and commercial radio or television stations.*

Performance Element: Comprehend the use of promotional materials, standard public service announcements, commercials/ads, press kits, and advertising tags.

Measurement Criteria: *Develop a package of promotional materials.*

Measurement Criteria: *Identify standard public service announcements.*

Measurement Criteria: *Discuss commercials and advertising tags.*

Measurement Criteria: *Discuss what would be included in a press kit.*

Pathway KS Statement: Exhibit knowledge of ethics and legal issues related to journalism and broadcasting.

Performance Element: Identify ethical responsibilities and how they relate to the degree of influence the media has on individuals.

Measurement Criteria: *Discuss why it is important to pursue truth in ambiguous situations.*

Measurement Criteria: *Demonstrate ethical behavior in writing or speaking, related to presenting information to the public.*

Performance Element: Demonstrate professional conduct and a professional code of ethics.

Measurement Criteria: *Identify groups that define a code of ethics for journalism and broadcasting.*

Measurement Criteria: *Discuss guidelines for the use of materials developed by others.*

Performance Element: Investigate how the First Amendment, Freedom of

Pathway Topic: Journalism and Broadcasting Pathway

Information Act, libel, slander, and copyright laws affect journalism and broadcasting.

Measurement Criteria: *Compare journalism and broadcasting in this country to that of other countries that do not have rights such as those provided by the First Amendment in the United States.*

Measurement Criteria: *Describe the procedure for obtaining information under the Freedom of Information Act.*

Measurement Criteria: *Describe copyright laws related to the use of text; images; and recorded, Internet, and oral materials.*

Measurement Criteria: *Describe issues related to libel and slander.*

Performance Element: Investigate what constitutes plagiarism and invasion of privacy.

Measurement Criteria: *Describe a scenario that involves invasion of privacy issues.*

Measurement Criteria: *Describe a scenario that involves plagiarism.*

Performance Element: Comprehend legal responsibilities associated with the use of public airwaves and station operation as required by federal governmental agencies.

Measurement Criteria: *Identify the federal agencies that have jurisdiction over public airwaves.*

Measurement Criteria: *Describe the scope of issues addressed in federal laws and regulations related to broadcasting.*

PATHWAY: Performing Arts

Pathway Topic: Dance

Pathway KS Statement: Demonstrate an awareness of the arts in various cultures.

Performance Element: Articulate the characteristics of various arts from past and/or present cultures.

Measurement Criteria: *Explain the arts from past and present cultures.*

Measurement Criteria: *Exhibit the arts from the medieval period.*

Measurement Criteria: *Exhibit the arts from the 20th century.*

Performance Element: Analyze the origin and evolution of the arts.

Measurement Criteria: *Illustrate how the arts originated and evolved.*

Measurement Criteria: *Analyze the origin of the arts.*

Measurement Criteria: *Analyze the evolution of the arts.*

Measurement Criteria: *Analyze cultural venues in the arts.*

Performance Element: Analyze similar themes and their various cultural interpretations.

Measurement Criteria: *Compare the theme of revenge through various cultural interpretations.*

Measurement Criteria: *Compare a love theme from various cultural perspectives and interpretations.*

Pathway KS Statement: Compare and contrast the roles of creators, performers, and others involved in the production and presentation of the performing arts.

Performance Element: Define the roles of creators, performers, and others involved in the production and presentation of the arts.

Measurement Criteria: *Identify the roles of creators, performers and others involved in the production and presentation of the arts.*

Measurement Criteria: *Compare the role of a creator with that of a performer.*

Measurement Criteria: *Compare the role of a performer with that of the technical design crew.*

Performance Element: Define what factors could affect the roles of creators, performers and others in the production and presentation of the arts.

Measurement Criteria: *Analyze examples of how current and future national and international events could affect the roles of creators, performers and others involved.*

Measurement Criteria: *Analyze how financial support could affect the roles of creators, performers, and others.*

Measurement Criteria: *Evaluate how various community mores might affect the roles of creators, performers and others.*

Measurement Criteria: *Analyze how community involvement could affect the roles of creators, performers, and others involved.*

Pathway KS Statement: Analyze basic movement content in dance.

Performance Element: Demonstrate appropriate skeletal alignment, body-part articulation, strength, flexibility, agility, and coordination in locomotor and non-locomotor/axial movements.

Pathway Topic: Dance

Measurement Criteria: *Demonstrate specific dance movements showing the importance of using appropriate skeletal alignment in dance.*

Measurement Criteria: *Demonstrate various examples differentiating body-art articulation.*

Measurement Criteria: *Illustrate exercises that build strength, flexibility, agility, and coordination in locomotor axial movements.*

Measurement Criteria: *Illustrate exercises that build strength, flexibility, agility and coordination in non-locomotor axial movements.*

Measurement Criteria: *Demonstrate body projection while performing dance skills.*

Performance Element: Demonstrate rhythm.

Measurement Criteria: *Apply an ability to listen and distinguish rhythm patterns in music.*

Measurement Criteria: *Apply various rhythm patterns to basic dance movements.*

Measurement Criteria: *Practice basic dance movements using proper tempo and pace.*

Measurement Criteria: *Demonstrate the ability to keep rhythm, tempo, and pace in a dance movement.*

Performance Element: Create and perform combinations and variations in a broad dynamic range.

Measurement Criteria: *Apply an understanding of basic dance combinations using appropriate movements.*

Measurement Criteria: *Apply variations of rondo, round, and contemporary forms.*

Measurement Criteria: *Demonstrate an understanding of basic dance combinations and variations using appropriate movements.*

Measurement Criteria: *Refine techniques through self-evaluation and correction.*

Performance Element: Demonstrate use of space through movement and interaction in space.

Measurement Criteria: *Demonstrate use of personal, interactional, and environmental space.*

Measurement Criteria: *Illustrate uses of space in terms of solo, duet, and group performance.*

Pathway KS Statement: Demonstrate complex steps and patterns from various dance styles and traditions.

Performance Element: Demonstrate choreographic principles, processes, and structures.

Measurement Criteria: *Define choreographic principles, processes, and structures.*

Measurement Criteria: *Apply principles of contrast and transition.*

Measurement Criteria: *Apply processes of reordering and chance.*

Measurement Criteria: *Demonstrate processes of improvisation.*

Measurement Criteria: *Demonstrate structures or forms of AB, ABA, canon, call and response, and narrative.*

Performance Element: Apply techniques required for partner and ensemble performances.

Measurement Criteria: *Demonstrate partner/ensemble copying, leading, and following.*

Measurement Criteria: *Perform as a partner or in an ensemble an understanding of*

Pathway Topic: Dance

complementary and contrasting shapes.

Measurement Criteria: *Demonstrate partner/ensemble taking and supporting weight.*

Performance Element: Evaluate an original work.

Measurement Criteria: *Develop an original work.*

Measurement Criteria: *Demonstrate a high level of consistency and reliability in performing technical skills.*

Measurement Criteria: *Perform technical skills with artistic expression demonstrating clarity, rhythm, and stylistic nuance.*

Measurement Criteria: *Refine an original work.*

Measurement Criteria: *Demonstrate artistic discipline to achieve an ensemble in rehearsal and performance.*

Pathway Topic: Music

Pathway KS Statement: Demonstrate, both alone and with others, vocal or instrumental performance that includes a varied repertoire of music.

Performance Element: Recognize melodies, variations, and accompaniments.

Measurement Criteria: *Identify harmonizing parts.*

Measurement Criteria: *Identify rhythmic and melodic variations on given pentatonic melodies and those in major and minor keys.*

Measurement Criteria: *Identify original melodies over given chord progressions, each in a consistent style, meter, and tonality.*

Performance Element: Demonstrate the ability to recognize and/or read musical symbols.

Measurement Criteria: *Demonstrate the ability to perform both alone and with others music notational symbols.*

Measurement Criteria: *Demonstrate the ability to perform music vocabulary in a varied repertoire of music.*

Measurement Criteria: *Demonstrate the ability to perform musical compositions, sing or perform on instruments, in a varied repertoire of music.*

Performance Element: Demonstrate the ability to realize instrumental or vocal music.

Measurement Criteria: *Perform vocal or instrumental music with creative expression.*

Performance Element: Utilize and distinguish the elements of music in a given work.

Measurement Criteria: *Identify the theme, the key, tempo, and mood in a given work.*

Measurement Criteria: *Listen to a given work distinguishing the elements of music.*

Measurement Criteria: *Play or vocalize a given work utilizing an understanding of the elements of music it encompasses.*

Pathway KS Statement: Analyze aural examples of various repertoires of music representing diverse styles, cultures and historical periods.

Performance Element: Recognize music from historical periods.

Measurement Criteria: *Demonstrate knowledge of musical styles that represent specific historical periods and cultures.*

Measurement Criteria: *Describe unique characteristics of music used for different purposes in cultures throughout history.*

Measurement Criteria: *Listen to known composers and their repertoire, which*

Pathway Topic: Music

represents specific historical periods and their emotional messages.

Performance Element: Articulate the characteristics of various forms of music from past and/or present cultures.

Measurement Criteria: *Demonstrate an expanded vocabulary when responding to the expressive qualities of different pieces of music.*

Measurement Criteria: *Identify commonalties and differences between different pieces of music from diverse cultures.*

Performance Element: Compare ways in which the same musical elements are used in different styles of music.

Measurement Criteria: *Identify musical styles from different cultures.*

Measurement Criteria: *Compare and contrast the stylistic elements of music from different cultures.*

Measurement Criteria: *Describe the function of music within different cultures.*

Pathway KS Statement: Demonstrate knowledge of music theory.

Performance Element: Demonstrate knowledge of the timbre in arranging and composing music.

Measurement Criteria: *Identify compositions with a wide range of sound sources.*

Measurement Criteria: *Identify the sound sources in a music arrangement.*

Measurement Criteria: *Identify the usage of sound sources when arranging music.*

Performance Element: Demonstrate knowledge of musical expression

Measurement Criteria: *Identify the elements of music that produce an expressive effect.*

Measurement Criteria: *Perform the range of expressive effects and artistic expressions through vocal and instrumental music.*

Measurement Criteria: *Practice using intuitive reactions experienced in vocal and instrumental music for expressive effect.*

Performance Element: Demonstrate technical skills in arranging and composing music.

Measurement Criteria: *Compose a simple musical composition that applies the technical skills.*

Measurement Criteria: *Analyze more complex compositions using the technical skills achieved.*

Performance Element: Demonstrate an understanding of improvisational music.

Measurement Criteria: *Compare theory-based and performance-based music.*

Pathway Topic: Theatre and Playwriting

Pathway KS Statement: Analyze the physical, emotional, and social dimensions of characters found in dramatic texts from various styles and media.

Performance Element: Demonstrate the physical dimensions of character in dramatic texts from various styles and media.

Measurement Criteria: *Perform different physical attributes that a character may possess.*

Measurement Criteria: *Perform different vocal attributes that a character may possess.*

Pathway Topic: Theatre and Playwriting

Measurement Criteria: *Explore a variety of physical charactistics associated with different theatrical styles.*

Performance Element: Demonstrate the emotional dimensions of characters in dramatic texts utilizing different styles in various media.

Measurement Criteria: *Identify different emotional dimensions of characters found in dramatic texts from various styles and media.*

Measurement Criteria: *Demonstrate examples of the emotional dimensions of characters found in dramatic texts from various styles and media.*

Measurement Criteria: *Analyze the differences in playing various characters and their emotional dimensions.*

Performance Element: Demonstrate the social context of characters found in dramatic texts from various styles and media.

Measurement Criteria: *Identify different social context of character relationships, class, and societal situations found in dramatic texts from various styles and media.*

Measurement Criteria: *Identify different social context in terms of place, period of set, and time of writing, found in dramatic texts from various styles and media.*

Performance Element: Create characters consistent with a variety of styles, including classical, contemporary, and realistic/non-realistic dramatic texts in informal/formal theatre, film, television, or electronic media productions.

Measurement Criteria: *Describe characters consistent with a variety of styles.*

Measurement Criteria: *Perform characters demonstrating a variety of styles.*

Pathway KS Statement: Demonstrate acting technique.

Performance Element: Recognize various classical and contemporary acting techniques.

Measurement Criteria: *Identify classical or contemporary acting techniques.*

Measurement Criteria: *Perform both classical and contemporary acting techniques.*

Performance Element: Create and sustain characters using appropriate styles and techniques.

Measurement Criteria: *Perform a scene where the actor creates and sustains a character.*

Measurement Criteria: *Demonstrate the professional characteristics needed as an actor to achieve an ensemble in rehearsal and performance.*

Pathway KS Statement: Compare and contrast the roles of playwrights, actors, and others involved in the production and presentation of the performing arts.

Performance Element: Demonstrate and utilize the technical aspects of theater properties from the perspective of the playwright and actor.

Measurement Criteria: *Identify the technical aspects of theater properties from the perspective of the playwright and actor.*

Measurement Criteria: *Illustrate visual examples of theater properties from a musical performance.*

Pathway Topic: Theatre and Playwriting

Pathway KS Statement: Demonstrate the ability to write stage, film, television, or electronic media scripts in a variety of traditional and current formats.

Performance Element: Demonstrate the ability to write stage scripts in a variety of traditional and current formats.

Measurement Criteria: *Identify structural elements for a stage script in a traditional or current format.*

Measurement Criteria: *Create a stage script in a traditional or current format.*

Performance Element: Demonstrate the ability to write film scripts in a variety of traditional and current formats.

Measurement Criteria: *Identify structural elements for a film script in a traditional or current format.*

Measurement Criteria: *Create a film script in a traditional or current format.*

Performance Element: Demonstrate the ability to write television scripts in a variety of traditional and current formats.

Measurement Criteria: *Identify structural elements for a television script in a traditional or current format.*

Measurement Criteria: *Create a television script in a traditional or current format.*

Performance Element: Demonstrate the ability to write electronic media scripts in a variety of traditional and current formats.

Measurement Criteria: *Identify structural elements for an electronic media script in a traditional or current format.*

Measurement Criteria: *Create an electronic media script in a traditional or current format.*

Measurement Criteria: *Research the social, psychological, technical and legal issues pertinent to developing a program for an electronic media script in a traditional or current format.*

Pathway KS Statement: Demonstrate knowledge of commercial aspects of performing arts.

Performance Element: Identify the commercial aspects of performing arts.

Measurement Criteria: *Illustrate the commercial aspects available in the audio and video recording industries.*

Measurement Criteria: *Illustrate the commercial aspects available in live stage and theater productions.*

Measurement Criteria: *Illustrate the commercial aspects available in playwriting.*

Performance Element: Interpret the commercial aspects of the performing arts.

Measurement Criteria: *Demonstrate how the commercial aspects of music, dance and choreography are interrelated.*

Measurement Criteria: *Demonstrate how the commercial aspects of musical and theatrical productions evolved.*

Measurement Criteria: *Demonstrate the commercial aspects involved in creating a modern production.*

Performance Element: Analyze how the commercial aspects of the arts have evolved regarding audience demographics, marketing campaigns, wages and other areas.

Pathway Topic: Theatre and Playwriting

Measurement Criteria: *Apply examples showing how the commercial aspects of the performing arts can evolve.*

Measurement Criteria: *Compare the commercial aspects of the arts industry historically.*

Pathway Topic: Technical Design and Production: Sound, Stage Sets, Lighting, Costumes, Hair and Make-up

Pathway KS Statement: Analyze how technical design (lighting, sound, costumes, make-up, etc.) contributes to performance.

Performance Element: Demonstrate how costuming conveys the mood, character, historical context, and social status of a character.

Measurement Criteria: *Explain how costume color, fabric, and design convey mood, character, historical context, and social status of characters.*

Measurement Criteria: *Create costuming that conveys character.*

Measurement Criteria: *Create costuming that conveys the mood and historical context.*

Measurement Criteria: *Create costuming that conveys the social status of characters.*

Performance Element: Demonstrate how stage lighting affects mood, historical context, and character.

Measurement Criteria: *Identify how lighting affects mood, historical context, and character in a scene.*

Measurement Criteria: *Create lighting techniques to affect mood, historical context, and character.*

Pathway KS Statement: Research past and present production stage sets, costumes, lighting, and other effects that support a performance.

Performance Element: Interpret cultural and historical eras in theater.

Measurement Criteria: *Compare how stage sets, costumes, lighting and other effects support cultural interpretations.*

Measurement Criteria: *Analyze the similarities and differences between cultural and historical periods through theatrical design.*

Performance Element: Compare similar themes and how they have been interpreted in different cultures.

Measurement Criteria: *Analyze similar themes and how they have been interpreted in different cultures.*

Measurement Criteria: *Compare similar themes and their treatment in different cultures and in various informal settings.*

Pathway KS Statement: Demonstrate how technology reinforces, enhances, or alters performances.

Performance Element: Analyze productions to determine how technology reinforces, enhances or alters performances.

Measurement Criteria: *Compare and contrast productions to show how technology alters or enhances performances.*

Pathway KS Statement: Analyze how artistic processes, organizational structure, and business principles are interrelated in the various arts.

Performance Element: Analyze artistic processes, organizational structure, and

Pathway Topic: Technical Design and Production: Sound, Stage Sets, Lighting, Costumes, Hair and Make-up

business principles as they relate to the arts.

Measurement Criteria: *Define elements as they relate to the arts.*

Measurement Criteria: *Analyze artistic processes.*

Measurement Criteria: *Analyze organizational and business principles.*

Performance Element: Compare how artistic processes, organizational structure, and business principles are used in the performing arts.

Measurement Criteria: *Design an organizational chart outlining the technical design and production crew for a play versus an opera.*

Measurement Criteria: *Compare the artistic process of a musical conductor versus a soloist in preparation for a concert.*

Measurement Criteria: *Compare how period research relates to various performing arts venues, such as musical interpretation, playwriting, and stage design.*

Measurement Criteria: *Analyze the dissimilar areas of performing arts relative to artistic processes, venues and organizational structures.*

Pathway KS Statement: Analyze stage and production management.

Performance Element: Identify and apply knowledge of stage management and organization.

Measurement Criteria: *Identify the organizational chart for a stage management team.*

Measurement Criteria: *Identify the technical crew in an organizational chart for a professional versus a community theater production.*

Measurement Criteria: *Apply knowledge of stage management and organization for a play.*

Measurement Criteria: *Apply knowledge of stage management and organization in selecting stage set designs for a musical performance.*

Performance Element: Identify and apply theatrical terms relative to technical design and production.

Measurement Criteria: *Identify industry terminology for theatrical lighting, costuming, scenery, hair, make-up, and properties.*

Measurement Criteria: *Demonstrate knowledge of technical design and production terminology.*

Measurement Criteria: *Apply theatrical terminology in developing technical design and production aspects for a play.*

Measurement Criteria: *Evaluate how theater productions have benefited from stage crews knowledgeable of technical design and production.*

Performance Element: Demonstrate the ability to work within a theatrical production.

Measurement Criteria: *Demonstrate understanding of the role of the technical crew prior to and during production.*

Measurement Criteria: *Identify responsibilities of technical crew in various styles of production.*

Measurement Criteria: *Demonstrate working successfully with performers before final dress rehearsal.*

Pathway Topic: Technical Design and Production: Sound, Stage Sets, Lighting, Costumes, Hair and Make-up

Performance Element: Demonstrate artistic discipline to achieve an ensemble in rehearsal and performance.

Measurement Criteria: *Describe personal characteristics that promote success from an ensemble in rehearsal and performance.*

Measurement Criteria: *Describe the steps needed to achieve optimal artistic discipline from an ensemble rehearsal and performance.*

Measurement Criteria: *Demonstrate the responsibility and professionalism needed as a member of an ensemble in rehearsal and performance.*

PATHWAY: Printing Technology

Pathway Topic: Printing

Pathway KS Statement: Apply knowledge of the processes required for the production of various printed products.

Performance Element: Demonstrate the diversity of the printing process to include paper, non-paper substrates, and specialty products.

Measurement Criteria: *Identify the printing processes used to create books, money, containers, and wallpaper.*

Measurement Criteria: *Identify printing processes used on non-paper substrates, including packaging, mylar, and foils.*

Measurement Criteria: *Identify the processes used to print on credit cards, laminates, flooring, pharmaceuticals, and food products.*

Performance Element: Examine the impact of the printing industry on the US economy.

Measurement Criteria: *Describe the economic aspects of printing in terms of profit and number of employees involved in the industry.*

Performance Element: Examine the impact of emerging technologies in hardware and software applications.

Measurement Criteria: *Describe the expansion of printing with the development of computer applications.*

Measurement Criteria: *Describe the resulting change in lifestyle of printing employees related to technology.*

Pathway KS Statement: Manage the printing through customer service and sales, scheduling, and quality control.

Performance Element: Apply knowledge of customer needs and expectations with printing services being promoted.

Measurement Criteria: *Identify customer requirements, timelines, and budget in a given situation.*

Measurement Criteria: *Verify final costs and ability to produce materials for time specified to customer.*

Performance Element: Apply knowledge of services, equipment, capabilities, workflow process, data acquisition, and technology to customer service.

Measurement Criteria: *Analyze cluster data files to determine compatibility with printing processes.*

Measurement Criteria: *Determine if graphics, images, film fonts, inserts, etc. are required for a print job.*

Measurement Criteria: *Disseminate customer information to production department.*

Measurement Criteria: *Communicate with customer to provide updates in schedule and product status.*

Performance Element: Analyze scheduling processes to ensure timely completion of projects.

Measurement Criteria: *Plan project schedule related to job specifications.*

Measurement Criteria: *Schedule resources to complete job.*

Measurement Criteria: *Monitor project status.*

Performance Element: Identify quality control measures.

Pathway Topic: Printing

Measurement Criteria: *Communicate quality standards and expectations for a job to technical production staff.*

Measurement Criteria: *Monitor project quality to meet required standards.*

Measurement Criteria: *Specify points in process for client approval.*

Measurement Criteria: *Demonstrate copying and backup processes for client files.*

Pathway KS Statement: Demonstrate preparation of customer materials for imaging.

Performance Element: Demonstrate previewing materials for imaging (pre-flighting).

Measurement Criteria: *Analyze client disc files to ensure software and hardware compatibility for the job components.*

Measurement Criteria: *Identify required job components including graphics, fonts, and images; transparencies; hard mechanicals; and film.*

Measurement Criteria: *Demonstrate resolution of file errors.*

Performance Element: Apply knowledge of camera and scanner operations to produce images using process photography.

Measurement Criteria: *Identify the types of press and types of paper for press gain compensation.*

Measurement Criteria: *Analyze original to determine required reproduction techniques.*

Measurement Criteria: *Demonstrate capturing an image.*

Measurement Criteria: *Differentiate between transmissive versus reflective light.*

Measurement Criteria: *Illustrate understanding of color separation (RGB to CMYK).*

Performance Element: Demonstrate conversion from analog to digital forms, using scanning equipment.

Measurement Criteria: *Demonstrate adjusting the scanning equipment for various processes.*

Measurement Criteria: *Demonstrate how to adjust images.*

Measurement Criteria: *Retrieve digital images.*

Performance Element: Demonstrate moving manuscripts into a form that is camera-ready copy.

Measurement Criteria: *Use word processing to develop camera-ready copy.*

Pathway KS Statement: Analyze image retrieval through refinement, page assembly processes and type set, and trapping.

Performance Element: Identify processes to modify images to conform to layout design.

Measurement Criteria: *Comprehend the process of color separation.*

Measurement Criteria: *Identify processes used to manipulate the images to meet specifications.*

Performance Element: Examine page assembly process.

Measurement Criteria: *Identify the processes involved in building the document.*

Measurement Criteria: *Identify the steps in preparing files for imaging.*

Measurement Criteria: *Identify problems that can occur in the page assembly process.*

Performance Element: Examine trapping processes.

Pathway Topic: Printing

Measurement Criteria: *Define trapping.*

Measurement Criteria: *Identify trapping requirements and processes.*

Pathway KS Statement: Analyze output processes, including digital, film, directive platemaking, and cylinders.

Performance Element: Examine digital output software.

Measurement Criteria: *Explain the processes for which CTP, PDF, ADOBE, PS, and DSC would be used.*

Performance Element: Examine film output processes.

Measurement Criteria: *Describe the critical elements in creating proofs and films.*

Performance Element: Examine directive processes.

Measurement Criteria: *Describe the processes that take output directly to the press.*

Performance Element: Examine platemaking and cylinders as output processes.

Measurement Criteria: *Describe platemaking and cylinder-making.*

Pathway KS Statement: Examine the finishing and distribution operations related to printing.

Performance Element: Apply knowledge and skills related to binding processes used to finish printed materials.

Measurement Criteria: *Define binding processes, including cutting, folding, and trimming.*

Measurement Criteria: *Calculate basic paper counts from a stock sheet.*

Measurement Criteria: *Demonstrate folding a single and tri-fold brochure, adapting equipment as needed.*

Measurement Criteria: *Identify saddle stitch, perfect bind, and flat stitching in various printed materials.*

Measurement Criteria: *Demonstrate basic saddle stitch and simple padding press operations.*

Performance Element: Examine the specialty operations related to finishing.

Measurement Criteria: *Define specialty processes.*

Measurement Criteria: *Identify embossing, foil stamping, die cutting, and laminating samples in printed materials.*

Performance Element: Apply packaging knowledge and skills to provide the customer with delivery of the product as specified.

Measurement Criteria: *Identify how paper labels, ink jet labels, and bulk forms are used and printed for packages.*

Measurement Criteria: *State the postal regulations related to packages, contents, size, and destinations.*

Measurement Criteria: *Describe each of the following mail processes and when each is used: sorting, barcodes, bundling, and sacking.*

Measurement Criteria: *Demonstrate meeting customer needs in labeling, packaging, and shipping to meet expected standards.*

Pathway KS Statement: Apply knowledge of basic printing processes.

Performance Element: Explain printing processes related to lithographic, planographic, gravure, intaglio, and screen.

Pathway Topic: Printing

Measurement Criteria: *Define each process.*

Measurement Criteria: *Identify the processes that are from the surface, below the surface, and through the surface.*

Measurement Criteria: *Describe the product application for each type of process.*

Performance Element: Examine ink and ink processes used for various types of printing.

Measurement Criteria: *Identify how to select an ink for a given printing process.*

Measurement Criteria: *Describe how the properties of ink affect coverage, color, and color separation.*

Measurement Criteria: *Explain the application of ink for printing processes, including those from the surface, below the surface, and through the surface.*

Performance Element: Apply knowledge of basic printing processes.

Measurement Criteria: *Identify basic offset duplication parts and operation.*

Measurement Criteria: *Perform basic set-up for printing a single color job.*

Measurement Criteria: *Produce a printed single color job using an offset duplicator.*

Measurement Criteria: *Perform basic cleanup and maintenance.*

PATHWAY: Telecommunications

Pathway Topic: Telecommunications

Pathway KS Statement: Demonstrate the use of industry-specific terminology, tools and test equipment related to telecommunications.

Performance Element: Define terms utilized in direct, alternating current and digital technology.

Measurement Criteria: *Identify terms as utilized in telecommunications.*

Measurement Criteria: *Construct AC and DC circuits.*

Measurement Criteria: *Use AC and DC terminology.*

Measurement Criteria: *Apply logical and systematic approach to troubleshooting network devices.*

Performance Element: Demonstrate use and care of hand and power tools.

Measurement Criteria: *Identify hand and power tools.*

Measurement Criteria: *Explain use and care of hand and power tools.*

Measurement Criteria: *Practice industry established procedures for use of hand and power tools.*

Performance Element: Demonstrate use and care of test equipment.

Measurement Criteria: *Examine varieties of test equipment for specific uses.*

Measurement Criteria: *Apply use and care principles to testing equipment.*

Measurement Criteria: *Select specific test equipment.*

Measurement Criteria: *Use test equipment.*

Pathway KS Statement: Describe the characteristics of analog and digital technologies applications for telecommunications.

Performance Element: Analyze analog circuit and digital logic devices.

Measurement Criteria: *Apply logical and systematic approach to troubleshooting analog and digital devices.*

Measurement Criteria: *Construct analog to digital and digital to analog devices.*

Measurement Criteria: *Demonstrate understanding of frequency and spectrum measurements.*

Performance Element: Demonstrate analog circuit test procedures.

Measurement Criteria: *Demonstrate how to set-up and operate test equipment for analog circuit tests.*

Measurement Criteria: *Use analog circuit test procedures.*

Performance Element: Demonstrate digital signal technology.

Measurement Criteria: *Identify digital signal technology.*

Measurement Criteria: *Analyze varieties of digital signal technology.*

Pathway KS Statement: Demonstrate installation techniques and processes utilizing telecommunication tools and materials.

Performance Element: Demonstrate knowledge of soldering for fasteners and terminals.

Measurement Criteria: *Identify types of soldering for fasteners and terminals.*

Measurement Criteria: *Demonstrate use of fasteners and terminals.*

Measurement Criteria: *Demonstrate wire-wrapping techniques.*

Pathway Topic: Telecommunications

Performance Element: Explain installation strengths and weaknesses including fiber, coaxial, wireless, copper and other mediums.

Measurement Criteria: *Identify installation strengths and weaknesses utilizing a physical layout.*

Measurement Criteria: *Define methods for tagging wires and cables of various types.*

Measurement Criteria: *Explain testing procedures and terminate as necessary.*

Pathway KS Statement: Analyze schematics, diagrams, and blueprints using appropriate terms, vocabulary and industry-specific codes and regulations.

Performance Element: Interpret industry specific codes and regulations.

Measurement Criteria: *Analyze codes and regulations.*

Measurement Criteria: *Interpret codes and regulations.*

Measurement Criteria: *Identify occupationally specific required licenses.*

Measurement Criteria: *Demonstrate familiarity with coding and certifying agencies.*

Performance Element: Analyze basic network architecture.

Measurement Criteria: *Exhibit knowledge of characteristics of network components.*

Measurement Criteria: *Analyze frame types and formats for networks.*

Measurement Criteria: *Analyze protocols for basic network architecture.*

Measurement Criteria: *Exhibit knowledge of packet-switching techniques.*

Performance Element: Interpret schematics, diagrams, blueprints, and network topology maps.

Measurement Criteria: *Identify and use common notations and symbols.*

Measurement Criteria: *Explain the meanings of symbols, color codes, acronyms, references and maps.*

Measurement Criteria: *Explain use of schematics, diagrams, and blueprints to construct/assemble equipment.*

Measurement Criteria: *Interpret point to point network topologies.*

Performance Element: Demonstrate generating technical documentation.

Measurement Criteria: *Prepare customer documents used for removal, repair and reinstallation of telecommunications system or components.*

Measurement Criteria: *Maintain service documentation library/internal file.*

Measurement Criteria: *Demonstrate the ability to document engineering changes.*

Measurement Criteria: *Perform complete documentation of maintenance and repair actions.*

Pathway KS Statement: Apply decision-making and problem-solving techniques to repair and replacement procedures for telecommunications industry.

Performance Element: Demonstrate knowledge of procedures for network equipment repair.

Measurement Criteria: *Identify procedures needed for network equipment repair.*

Measurement Criteria: *Select industry-specific procedure for equipment repair.*

Measurement Criteria: *Demonstrate procedures for equipment repair.*

Performance Element: Analyze replacement procedures considering standard maintenance processes.

Pathway Topic: Telecommunications

Measurement Criteria: *Identify replacement procedures considering standard maintenance processes.*

Measurement Criteria: *Interpret standard replacement procedures.*

Measurement Criteria: *Interpret standard industry-specific procedures for maintenance processes.*

Pathway KS Statement: Apply knowledge of telecommunications to provide service and solve problems for customers.

Performance Element: Examine information related to customer needs and solve customer problems.

Measurement Criteria: *Identify information related to customer needs.*

Measurement Criteria: *Define the problem-solving method to be utilized.*

Measurement Criteria: *Identify the obstacles to solving a problem and meeting the customer's needs.*

Measurement Criteria: *Assess each alternative to determine potential solution.*

Measurement Criteria: *Select service or problem solving plan related to customer needs.*

Performance Element: Demonstrate expected customer service to meet the intent of state and national guidelines for consumer rights.

Measurement Criteria: *Identify state and national guidelines for consumer rights of customers.*

Measurement Criteria: *Apply procedures to provide for consumer rights of customers.*

Performance Element: Explain data, with accuracy, related to problems, time for repairs, and extent of the service required to solve problems.

Measurement Criteria: *Explain technical information in terms that the customer understands.*

Measurement Criteria: *Apply communication skills with customers involving written, oral, listening and body language.*

Measurement Criteria: *Explain information in a timely and accurate manner.*

Measurement Criteria: *Explain the product and/or services that best meet the needs of the customer.*

Pathway KS Statement: Apply knowledge of telecommunications security.

Performance Element: Demonstrate basic understanding of demands of network security.

Measurement Criteria: *Comprehend the need for security.*

Measurement Criteria: *Demonstrate understanding of recognized security policies and procedures.*

Measurement Criteria: *Apply knowledge of the risks to data security.*

Performance Element: Analyze security risks and how to overcome the problems identified.

Measurement Criteria: *Apply knowledge of the risks telecommunications to identify potential areas of concern.*

Measurement Criteria: *Investigate a potential problem and provide alternatives to provide greater security for the telecommunications situation.*

Pathway KS Statement: Apply knowledge of network applications.

Pathway Topic: Telecommunications

Performance Element: Apply knowledge of transmission lines and network connectivity.

Measurement Criteria: *Exhibit knowledge of the principles and operation of wire and wireless systems.*

Measurement Criteria: *Comprehend the procedures and techniques used with wire and wireless technology.*

Measurement Criteria: *Apply principles of operations wire and wireless systems.*

Performance Element: Analyze specific specifications for a facility.

Measurement Criteria: *Identify the structure and systems requirements.*

Measurement Criteria: *Develop specifications required for a system.*

Measurement Criteria: *Analyze installation requirements to identify conflicts.*

Measurement Criteria: *Verify specifications and installations requirements.*

Performance Element: Comprehend the standards for communication networks.

Measurement Criteria: *Exhibit knowledge of high-speed networks and open system interconnection standards.*

Measurement Criteria: *Exhibit knowledge of protocols.*

Performance Element: Comprehend the Local Area Network (LAN) and the Wide Area Network (WAN) systems.

Measurement Criteria: *Exhibit knowledge of how Local Area Networks are installed and perform.*

Measurement Criteria: *Exhibit knowledge of how vice, data, and video interface in Wide Area Networks.*

Performance Element: Demonstrate installation of a network system.

Measurement Criteria: *Identify the components required for network installation.*

Measurement Criteria: *Develop an installation plan.*

Measurement Criteria: *Apply knowledge of operating systems and telecommunication hardware and software to install a system.*

Measurement Criteria: *Apply installation verification processes to ensure network is functioning and operating.*

Performance Element: Apply knowledge of troubleshooting for problems.

Measurement Criteria: *Exhibit knowledge of potential problem areas and alternative solutions.*

Measurement Criteria: *Describe diagnostic tools for use in maintenance and identification of system problems.*

Measurement Criteria: *Implement a plan to resolve problem area, identifying the problem, potential solutions, and documentation of resolution.*

PATHWAY: Visual Arts

Pathway Topic: Visual Arts Pathway

Pathway KS Statement: Research the scope of career opportunities and qualifications in the Visual Arts Pathway.

Performance Element: Examine the numerous career paths within visual arts to discover personal preferences.

Measurement Criteria: *Explore the careers of artists who create visual arts—fine art, commercial art, graphic art, public art, environmental art, etc.*

Measurement Criteria: *Explore careers of visual arts designers—interior designers, architects, fashion designers, textile artists, glass and ceramics artists, photo-journalists, etc.*

Measurement Criteria: *Explore the careers of those who manage, exhibit, and sell visual art works.*

Measurement Criteria: *Explore the careers of art curators, collectors, evaluators, and critics.*

Measurement Criteria: *Explore careers in art education—teachers, administrators, staff in museums, galleries, schools, and arts organizations; authors, illustrators, photographers, etc.*

Measurement Criteria: *Identify the preferred career opportunities.*

Performance Element: Identify required knowledge and skills, education opportunities, and lifestyles associated with different levels of employment in visual arts careers and related career fields.

Measurement Criteria: *Detail job description, qualifications, and requirements for several careers of interest.*

Measurement Criteria: *Match interests and abilities to career preferences.*

Performance Element: Compare the advantages and disadvantages of working independently and of working for others.

Measurement Criteria: *Review the knowledge and skills necessary to create, maintain, and promote a career as a visual artist.*

Measurement Criteria: *Research the knowledge and skills involved in owning an art-related business.*

Measurement Criteria: *Research the qualifications and skills necessary to entry-level, skilled level, and supervisory level jobs in arts facilities, schools, organizations, and businesses.*

Measurement Criteria: *Research the art market, evaluating works, formulating prices, writing contracts, purchasing and insuring works.*

Measurement Criteria: *Conclude which type of employment provides the best working conditions to suit personal preferences, characteristics, and values.*

Performance Element: Examine opportunities in visual arts careers to communicate to others in an articulate fashion the purpose of artwork, artists' intentions, and the way the process and materials help to achieve them.

Measurement Criteria: *Research the market to see what is being communicated in the types of work purchased by the public.*

Measurement Criteria: *Articulate the purposes of several pieces of artwork in different media.*

Pathway Topic: Visual Arts Pathway

Measurement Criteria: *Describe how the choice of materials and medium affect communication of a message.*

Measurement Criteria: *Compare artworks communicating a variety of artists' intentions including aesthetic appeal, functional design, self-expression, exploration of materials, documentation, etc.*

Pathway KS Statement: Research the history and evolution of visual arts and their role within society.

Performance Element: Compare the changing purposes served by visual arts throughout history.

Measurement Criteria: *Identify the purposes of visual arts historically, by examining works from various time periods.*

Measurement Criteria: *Compare examples of artwork from various periods that serve communal, social, religious, or political functions.*

Measurement Criteria: *Compare examples of artwork that document events and communicate information or ideas with those that arouse emotion by expressing feelings, experiences, or values.*

Performance Element: Analyze the opportunities for communication through the visual arts.

Measurement Criteria: *Describe contemporary and historical social issues and how they are communicated through content, form, and function in the visual arts.*

Measurement Criteria: *Describe contemporary and historical arts issues and how they are communicated through the visual arts.*

Measurement Criteria: *Identify how works of visual artists communicate the ideas of their culture and religion.*

Measurement Criteria: *Analyze the use of symbols in the visual arts of diverse cultures.*

Performance Element: Apply critical thinking skills to evaluate works of art.

Measurement Criteria: *Describe various approaches for evaluating visual arts from historical, cultural, and content viewpoints.*

Measurement Criteria: *Examine the evaluative process in terms of ethics, aesthetics, and social context.*

Measurement Criteria: *Describe ways to build aesthetic awareness and appreciation of art in a specific audience.*

Measurement Criteria: *Define interpretation and how to develop and support ideas.*

Measurement Criteria: *Develop analysis of art works derived from the descriptive elements, including form, medium, style, and subject matter.*

Measurement Criteria: *Relate the descriptive elements and analysis to current, historical, social, and cultural contexts.*

Performance Element: Demonstrate the ability to present and defend written and oral evaluations of visual art works.

Measurement Criteria: *Apply a critical method of evaluation to a work of art, resulting in a written report.*

Measurement Criteria: *Form interpretations through analysis of the structural elements, subject matter, and contextual data regarding a work of art.*

Pathway Topic: Visual Arts Pathway

Measurement Criteria: *Communicate an oral or written defense for judgment of an artwork.*

Measurement Criteria: *Assess the value and purpose of criticism in terms of author and audience, including aesthetic, social, cultural, and historical contexts.*

Performance Element: Analyze the development of tools and technologies and their affect on the evolution of visual arts.

Measurement Criteria: *Compare current visual arts technologies with those of 50 years ago.*

Pathway KS Statement: Analyze elements and principles of the visual arts and what they communicate.

Performance Element: Analyze the elements and principles of art applied to visual art forms.

Measurement Criteria: *Identify art elements, including line, color, shape, and texture in various media.*

Measurement Criteria: *Identify use of primary, secondary, and complementary colors in various media.*

Measurement Criteria: *Define tint, shade, hue, and value in relation to color theory.*

Measurement Criteria: *Identify standard geometric shapes used in construction and design layout.*

Measurement Criteria: *Compare samples of work that use contrast, unity, and emphasis.*

Performance Element: Analyze the communicative effects of art elements.

Measurement Criteria: *Identify the effects communicated by various types of line, including straight, curved, horizontal, vertical, and diagonal.*

Measurement Criteria: *Identify messages or meanings that colors communicate in various cultures.*

Measurement Criteria: *Compare asymmetrical and symmetrical images communicating balance.*

Measurement Criteria: *Compare repetition and pattern in fabric and other applications that communicate rhythm.*

Measurement Criteria: *Examine use of contrasting or unusual proportion to communicate ideas in various artworks.*

Pathway KS Statement: Analyze and create two- and three-dimensional art forms from various media in the visual arts.

Performance Element: Analyze art elements and principles of two-dimensional works of visual art in various media, including drawing, print making, and computer software.

Measurement Criteria: *Apply elements of art, including line, color, shape, and texture to create art forms in various two-dimensional media.*

Measurement Criteria: *Demonstrate anatomical figure drawing.*

Measurement Criteria: *Demonstrate drawing in one-point, two-point, and multi-point perspective.*

Measurement Criteria: *Create a work of art by applying color using pencils, markers, airbrush, dry media, water-based media, oil-based media, or*

Pathway Topic: Visual Arts Pathway

computer software.

Measurement Criteria: *Create work that demonstrates shape, volume, depth, and dimension.*

Measurement Criteria: *Demonstrate techniques that create actual and implied texture.*

Measurement Criteria: *Practice printmaking in various media.*

Measurement Criteria: *Prepare print surface and print medium.*

Measurement Criteria: *Demonstrate design principles in developing a project such as a brochure, logo, label, or textile design.*

Performance Element: Apply art elements and principles to photographic works of visual art in both traditional and digital photographic media.

Measurement Criteria: *Compare photographic media from traditional and digital processes.*

Measurement Criteria: *Produce a photograph using a camera with film, such as a 35mm SLR.*

Measurement Criteria: *Comprehend the processes used to develop photographic film, both color and black and white.*

Measurement Criteria: *Demonstrate the use of all darkroom equipment and processes.*

Measurement Criteria: *Identify paper characteristics in finished prints, and procedures for mounting, matting, and framing.*

Measurement Criteria: *Exhibit knowledge of photo imaging using a digital camera.*

Measurement Criteria: *Produce a variety of digital images using computer software.*

Performance Element: Analyze multimedia applications of software/hardware for the purposes of visual communications.

Measurement Criteria: *Examine digital animation tools, capabilities, and interface elements, such as those in Adobe After Effects.*

Measurement Criteria: *Create and import artwork and place on timeline to produce two-dimensional animations.*

Measurement Criteria: *Export animations as animated GIF files and include in a web page.*

Measurement Criteria: *Exhibit knowledge of graphic design and related software.*

Measurement Criteria: *Apply elements and principles of art to use of computer software.*

Measurement Criteria: *Create examples of computer graphics in commercial applications.*

Performance Element: Analyze art elements and principles of three-dimensional forms of visual art in various media.

Measurement Criteria: *Apply elements of art, including line, color, shape, and texture to create three-dimensional art forms in various media.*

Measurement Criteria: *Discuss the use of symmetry or asymmetry, and geometric shape in the construction of sculpture.*

Measurement Criteria: *Demonstrate techniques that produce various textures in clay, wax, wood, and metal.*

Measurement Criteria: *Assess the characteristics of textiles as a medium, including design, construction, use, maintenance, and care of textile products.*

Pathway Topic: Visual Arts Pathway

Measurement Criteria: *Analyze the use of art elements and principles in architecture, interior design, and environmental art.*

Measurement Criteria: *Assess the purposes of public art and what it communicates.*

Section IV – O*NET Crosswalk Report

Career Specialty/ Occupational Coding and Crosswalk

Summary

The objective of the Career Specialty/ Occupational Coding and Crosswalk project is to accomplish two basic tasks. The first is to design and establish a classification and coding structure for the States' Career Clusters Initiative. When completed, the classification and coding structure will be compatible with existing occupational classification systems and designed in a manner that allows for easy updating and the flexibility to add additional career pathways and occupational specialties.

Once the first step is completed for each cluster, the second step is to build a linkage system or crosswalk between the new career cluster classification system and the O*NET occupational classification system developed and operated by the U S Department of Labor. O*NET is a nationally recognized taxonomy with detailed descriptions and a rich database of information for each occupation.

Explanation of Crosswalk Table

The attached table lists each occupational specialty and its related O*NET occupation. It is sequenced by career pathway and occupational specialty code. It should be noted that the relationship between an occupational specialty and its related O*NET occupation is often not one-to-one. The O*NET occupation is often much broader covering two or more occupational specialties. In fact, even when multiple occupational specialties are assigned, they may only represent a part of a broader O*NET occupation.

Column 1: Lists occupational specialties that were identified by the Career Clusters Initiative. The occupational specialties are organized by cluster pathways and represent occupational titles with no definitions. They are intended to be a sample of occupations that help define the cluster and pathway.

Column 2: Represents related occupations from the O*NET occupational coding system.

Note: A crosswalk from the occupational specialties to the Classification of Instructional Programs (CIP) codes is forthcoming. The National Crosswalk Service Center is currently developing the CIP to O*NET crosswalk which will be the bridge to the career cluster occupational specialties. You may access this crosswalk in the near future at: http://www.xwalkcenter.org/

Arts, A/V Technology and Communications Career Cluster: Occupational Specialties and Related O*NET Occupations, Sequenced by Career Pathway and Occupational Specialty Code

Occupational Specialty		Related SOC/O*NET Occupation	
	Title	**Code**	**Title**
3.10000	**Audio and Video Technologies Pathway**		
3.10010	Video Systems Technicians	27-4011.00	Audio and Video Equipment Technicians
3.10020	Video Graphics, Special Effects, and Animation	27-1014.00	Multi-Media Artists and Animators
3.10030	Audio-Video Designers and Engineers	27-1024.00	Graphic Designers
3.10030	Audio-Video Designers and Engineers	27-1021.00	Commercial and Industrial Designers
3.10040	Technical Computer Support Technicians, State, Film, Video, and DVD	27-1014.00	Multi-Media Artists and Animators
3.10040	Technical Computer Support Technicians, State, Film, Video, and DVD	15-1041.00	Computer Support Specialists
3.10050	Audio-Video System Service Technicians	27-4011.00	Audio and Video Equipment Technicians
3.10060	Audio Systems Technicians	27-4011.00	Audio and Video Equipment Technicians
3.10060	Audio Systems Technicians	27-4014.00	Sound Engineering Technicians
3.20000	**Printing Technologies Pathway**		
3.20010	Graphics and Printing Equipment Operators	51-5023.09	Printing Press Machine Operators and Tenders
3.20010	Graphics and Printing Equipment Operators	51-5023.02	Offset Lithographic Press Setters and Set-Up Operators
3.20020	Lithographers and Platemakers	51-5022.13	Photoengraving and Lithographing Machine Operators and Tenders
3.20020	Lithographers and Platemakers	51-5022.07	Platemakers
3.20020	Lithographers and Platemakers	51-5022.10	Electrotypers and Stereotypers
3.20020	Lithographers and Platemakers	51-5022.11	Plate Finishers
3.20030	Computer Typography and Composition Equipment Operators	51-5022.05	Scanner Operators
3.20030	Computer Typography and Composition Equipment Operators	51-5022.09	Electronic Masking System Operators
3.20040	Desktop Publishing Specialists; Web Page Designers	43-9031.00	Desktop Publishers
3.20040	Desktop Publishing Specialists; Web Page Designers	27-1024.00	Graphic Designers
3.30000	**Visual Arts Pathway**		
3.30010	Commercial Photographers, Digital, Still, Video, Film	27-4021.00	Photographers

Arts, A/V Technology and Communications Career Cluster: Occupational Specialties and Related O*NET Occupations, Sequenced by Career Pathway and Occupational Specialty Code

Occupational Specialty		Related SOC/O*NET Occupation	
	Title	**Code**	**Title**
3.30020	Interior Designers, Commercial/Residential and Home Furnishings coordinators	27-1025.00	Interior Designers
3.30030	Graphic Designers, CAD Technicians, and Fashion Illustrators	27-1024.00	Graphic Designers
3.30030	Graphic Designers, CAD Technicians, and Fashion Illustrators	27-1013.01	Painters and Illustrators
3.30040	Textile Designers	27-1021.00	Commercial and Industrial Designers
3.30050	Commercial Artists, Illustrators, and Artists, all Media	27-1013.01	Painters and Illustrators
3.30050	Commercial Artists, Illustrators, and Artists, all Media	27-1013.02	Sketch Artists
3.30050	Commercial Artists, Illustrators, and Artists, all Media	27-1014.00	Multi-Media Artists and Animators
3.30060	Curators and Gallery Managers	25-4012.00	Curators
3.30070	Fashion Designers	27-1022.00	Fashion Designers
3.40000	**Performing Arts Pathway**		
3.40010	Production Managers, Digital, Video, Stage	27-2012.01	Producers
3.40010	Production Managers, Digital, Video, Stage	27-2012.02	Directors- Stage, Motion Pictures, Television, and Radio
3.40020	Cinematographers, Film/Video Editors	27-4031.00	Camera Operators, Television, Video, and Motion Picture
3.40020	Cinematographers, Film/Video Editors	27-4032.00	Film and Video Editors
3.40030	Dancers	27-2031.00	Dancers
3.40040	Play Writers, Screen Writers, Screen Editors, Script Writers	27-3041.00	Editors
3.40040	Play Writers, Screen Writers, Screen Editors, Script Writers	27-3043.00	Writers and Authors
3.40040	Play Writers, Screen Writers, Screen Editors, Script Writers	27-3043.02	Creative Writers
3.40050	Directors and Coaches, Performers, actors, Musicians	27-2012.03	Program Directors
3.40050	Directors and Coaches, Performers, actors, Musicians	27-2012.05	Technical Directors/Managers
3.40050	Directors and Coaches, Performers, actors, Musicians	27-2012.04	Talent Directors
3.40050	Directors and Coaches, Performers, actors, Musicians	27-2011.00	Actors
3.40050	Directors and Coaches, Performers, actors, Musicians	27-2031.00	Dancers
3.40050	Directors and Coaches, Performers, actors, Musicians	27-2042.01	Singers
3.40050	Directors and Coaches, Performers, actors, Musicians	27-2042.02	Musicians, Instrumental
3.40060	Make-Up Artists and Costume Designers	39-5091.00	Makeup Artists, Theatrical and Performance
3.40060	Make-Up Artists and Costume Designers	27-1022.00	Fashion Designers

Arts, A/V Technology and Communications Career Cluster: Occupational Specialties and Related O*NET Occupations, Sequenced by Career Pathway and Occupational Specialty Code

Occupational Specialty		Related SOC/O*NET Occupation	
	Title	**Code**	**Title**
3.40070	Stagecraft Designers, Lighters, Sets, Sound Effects, Acoustics, Painters	27-1027.01	Set Designers
3.40070	Stagecraft Designers, Lighters, Sets, Sound Effects, Acoustics, Painters	47-2141.00	Painters, Construction and Maintenance
3.40080	Composers, Conductors, and Music Instructors	27-2041.00	Music Directors and Composers
3.40080	Composers, Conductors, and Music Instructors	27-2041.01	Music Directors
3.40080	Composers, Conductors, and Music Instructors	25-1121.00	Art, Drama, and Music Teachers, Postsecondary
3.50000	**Journalism and Broadcasting Pathway**		
3.50010	Audio/Video Operations, Control Room Technician	27-4011.00	Audio and Video Equipment Technicians
3.50020	Station Managers and Radio and TV Announcers	11-1021.00	General and Operations Managers
3.50020	Station Managers and Radio and TV Announcers	27-3011.00	Radio and Television Announcers
3.50030	Publishers, Editors, and Journalists and Reporters, Print, Broadcast, Other	27-3021.00	Broadcast News Analysts
3.50030	Publishers, Editors, and Journalists and Reporters, Print, Broadcast, Other	27-3022.00	Reporters and Correspondents
3.50030	Publishers, Editors, and Journalists and Reporters, Print, Broadcast, Other	27-3041.00	Editors
3.50030	Publishers, Editors, and Journalists and Reporters, Print, Broadcast, Other	27-3043.03	Caption Writers
3.50030	Publishers, Editors, and Journalists and Reporters, Print, Broadcast, Other	27-3043.04	Copy Writers
3.50040	Broadcast Technicians	27-4012.00	Broadcast Technicians
3.60000	**Telecommunications Technologies Pathway**		
3.60010	Telecommunication Technicians	17-3023.01	Electronics Engineering Technicians
3.60020	Telecommunication Equipment, Cable, Line Repairers/Installers	49-9052.00	Telecommunications Line Installers and Repairers
3.60030	Telecommunication Computer Programmers, and Systems Analysts	15-1081.00	Network Systems and Data Communications Analysts

Arts, A/V Technology and Communications Career Cluster: Occupational Specialties and Related O*NET Occupations, Sequenced by Career Pathway and Occupational Specialty Code

Occupational Specialty		Related SOC/O*NET Occupation	
	Title	Code	Title

Section V – Cluster Profile
Advisory Committee List
Pilot Sites

Career Cluster Profile

Cluster Name: Arts, Audio-Video Technology and Communications

Project Lead State: V-TECS Member States

Project Lead State Contact Information:
Ronald D. McCage, Ed.D
Executive Director
V-TECS
1866 Southern lane
Decatur, GA 30033-4097
404 679 4501, ext 543
rmccage@v-tecs.org

Cluster Coordinators: Ronald D. McCage and Scott Hess

Cluster Definition: Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

Cluster Pathways: Audio and Video Technology and Film; Printing Technology; Visual Arts; Performing Arts; Journalism and Broadcasting; Telecommunications

Cluster Partners: List attached. (A number of associations and government agencies represent business, industry, labor, and education.)

Number of cluster partners in each of the following categories:

Postsecondary Education:	**3**
Secondary Education:	**2 + 9 pilot sites**
Business & Industry:	**5**
Labor:	**1**
Associations:	**8**
Government Agencies:	**14**

Deliverable # 1: Arts, Audio-Video Technology and Communications Career Cluster / Partners

Updated March 7, 2002

Name	Job Title	Organization/ Company/School	Address	City	State, ZIP	Phone	E-mail	Pathway
Tuttle, Lynn	Director, School to Work & Organization	Arizona Commission on the Arts	417 West Roosevelt St.	Phoenix	AZ 85003-1326		ltuttle@arizonaarts.org	
Foster, Pat		Arizona Department of Education	1535 West Jefferson, Bin 35	Phoenix	AZ 85007	602 542 5352	pfoster@mail2.ade.state.az	
Caldwell, Brad	Chairman of the Board of Governors	ICIA President of Integrated Media Systems	1011 N. Armando St.	Anaheim	CA 92806	714 688 7001		
Bell, Cynthia	Director, Vocational Education Office	District of Columbia Public Schools	825 N. Capitol Street, N.E. Room 8112	Washington	DC 20002	202 442 5062	bell@mercury.k12.dc.us	
Green, Kimberly	Executive Director	NASDVTE	444 North Capitol St., NW Suite 830	Washington	DC 20001	202 737 0303	kgreen@nasdvtec.org	
Clark, John	President	National Assn. Of Broadcast Employees & Technicians Communications Workers Assn.	501 3rd Street, NW	Washington	DC 20001-2797	202 434 1100		
Moffett, Ken		National Assn. Of Broadcast Employees & Technicians Communications Workers Assn.	501 3rd Street, NW	Washington	DC 20001	202 434 1254	kmoffett@nabet.cwa.org	
Fredette, Judy			825 N. Capitol Street, NE Room 8105	Washington	DC 20002	202 442 5069		
Stander, Robert	Director of Manufacturing	IBEW/AFL-CIO	1125 15th Street, NW Suite 1006	Washington	DC 20005			
Kaye, Shirley	Executive Director	Society of Professional Audio Recording Services	4300 10th Ave., North	Lake Worth	FL 33461	407 641 6648	spars@spars.com	
Eggleston, Bob	Vice Principal	Moanaula High School	2825 Ala Lima St.	Honolulu	HI 96818	808 833 1836		
Jones, Karla A.	Interim State Director for Voc Ed	University of Hawaii	2425 Campus Road, Sinclair Library – Mezzanine 2	Honolulu	HI 96822-7461	808 956 4791	kjones@hawaii.edu	
Harrison, Myril			East 14th & Grand Ave. Grimes State Office Bldg.	Des Moines	IA 50319-0146	515 281 3542	jerda.garey@ed.state.ia.us	
Wilson, Chuck	Executive Director	National Systems Contractors Assn.	419 First Street SE	Cedar Rapids	IA 52401	800 446 6722		

Name	Job Title	Organization/ Company/School	Address	City	State, ZIP	Phone	E-mail	Pathway
Strough, Cathy	Interim Business Education Program Manager	State Department of Education	650 West State Street	Boise	ID 83720-0095		cstrough@pte.state.id	
Oettel, Jim		Illinois State Board of Education Business, Community & Family Partnership	100 North First Street, Room E-439	Springfield	IL 62777	217 782 4870	joettel@smtp.isbe.state.il.us	
Robinson, Diana	Associate Superintendent	Illinois State Board of Education Business, Community & Family Partnership	100 North First Street, Room E-439	Springfield	IL 62777	217 782 4870	drobinso@smtp.isbe.state.il.us	
Masi, James	Executive Director	Northeast Center for Telecommunications Technologies	c/o STCC PME Armory Square	Springfield	MA 01105	800 421 9556	masi@mail.stcc.mass.edu	
Boxer, Harold		Music Media, Ltd. Audio Engineer Society	12926 Crisfield Rd.	Silver Springs	MD 20906-5134	301 946 8400		
Oliver, Katherine M.	Assistant State Superintendent	Maryland State Department of Education	200 W. Baltimore St.	Baltimore	MD 21201	410 767 0158	koliver@msde.state.md.us	
Lucas, Jeff	Lead Specialist, Career and Technical Education	Maryland State Department of Education	200 W. Baltimore St.	Baltimore	MD 21201	410 767 0158	jlucas@msde.state.md.us	
Krump, Betty M.	Executive Director	American Technical Education Association	North Dakota State College of Science	Wahpeton	ND 58076		krump@plains.nodak.edu	
Jurgens, Carol		Nebraska Department of Education	301 Centennial Mall South P. O. Box 94987	Lincoln	NE 68509-4987		cjurgens@edneb.org	
Mullarkey, Marion		Office of School-to-Career & College Initiatives	New Jersey Department of Education P. O. Box 500	Trenton	NJ 08625-0500	609 984 5958	mmullark@doe.state.nj.us	
Vitelli, Michael	Executive Vice President	Sony Electronics	1 Sony Drive	Park Ridge	NJ 07656	201 930 7871		
Kucera, Marilyn		New York State Education Department Office of Workforce Preparation	89 Washington Ave. Room 320 EB	Albany	NY 12234	518 474 5506	mkucera@mail.nysed.gov	
Stevens, Jean C.	Assistant Commissioner	Office of Workforce Preparation New York State Education Department	89 Washington Ave. Room 319 EB	Albany	NY 12234	518 474 8892	jstevens@mail.nysed.gov	
Furness, Roger		Audio Engineering Society	60 East 42nd Street, Room 2520	New York	NY 10165-2520	212 661 8528		

Name	Job Title	Organization/ Company/School	Address	City	State, ZIP	Phone	E-mail	Pathway
Miller, Chris	Chairman of the Board of Directors	Educational Communications Foundation President of Fairview MCSI	4932 S. 83rd East Ave.	Tulsa	OK 74145	918 664 8020	chris.miller@fairviewafx.com	
Simchock, K. C.		Pennsylvania Department of Education Bureau of Voc-Tech Ed.	333 Market St, 6th Floor	Harrisburg	PA 17126-0333	717 783 6592	ksimchock@state.pa.us	
Martin, B. T.		South Carolina Department of Education	1429 Senate St. 912-A Rutledge Office Bldg.	Columbia	SC 29201	803 734 8410	jcouch@sde.state.sc.us	
McLemore, Laurene		Tennessee Department of Education	Andrew Jackson Tower, 4th Floor 710 James Robertson Parkway	Nashville	TN 37243		btmartin@sde.state.sc.us	
Brooks,Sr., Neils W.	State Director	Office of Vocational and Adult Education Services Virginia Department of Education	P. O. Box 2120	Richmond	VA 23218-2120	804 225 2847	nbrooks@pen.k12.va.us	
Whelen, Belle	President	Northern Virginia Community College	4001 Wakefield Chapel Rd.	Annandale	VA 22003			
Lemke, Randall	ICIA Vice President of Strategic Initiatives and Director of the Foundation	Educational Communications Foundation	11242 Waples Mill Rd., Suite 200	Fairfax	VA 22303	800 659 7469 Ext. 307	rlemke@iciahq.org	
Winterton, Joyce	National Partnerships Manager	USA Today	1000 Wilson Blvd.	Arlington	VA 22229			
Lovejoy, Bret	Executive Director	Association for Career and Technical Education	1410 King Street	Alexandria	VA 22314	800 826 9972		

PILOT SITE LOCATIONS

Darla Glantz
Middle Bucks Institute of Technology
2740 Old York Road
Jamison, PA 18929

Lisa Motolinia
Western Suffolk BOCES
17 Westminster Avenue
Dix Hills, NY 11746

Mr. Joseph W. Underwood
Miami Senior High School
2450 S.W. 1st Street
Miami, FL 33135

Mr. Ric Watkins
Ms. Roslyn Hanson
Covington High School
73030 Lion Drive
Covington, LA 70433

Leland Smith
Peninsula High School/Gig Harbor High
14105 Purdy Drive, N.W.
Gig Harbor, WA 98332

Mr. James Gleason
Communications High School
New Bedford Road
Wall, NJ 07719

Maureen Deppman
Hannaford Career Center
51 Charles Avenue
Middlebury, VT 05753

Tenna Whitsel
Will Rogers High School
3909 East 5th Place
Tulsa, OK 74112

Ron Schwermin
Chatham-Glenwood High School
595 Chatham Road
Chatham, IL 62629

Section VI – Credentials

ARTS, AUDIO-VIDEO TECHNOLOGY AND COMMUNICATIONS CAREER CLUSTER PROGRAM

CERTIFICATION / LICENSURE OPTIONS AVAILABLE

JULY, 2002

GRANTING AGENCY and NAME OF CERTIFICATE / LICENSE	TYPE OF SPECIALTY OR CAREER	REQUIREMENTS
1. Professional Photographers of America (PPA) PPA Certified Photographer Certified Electronic Imager (CEI) Master Artist	Photographers Electronic Imager Artist Retouchers & Specialists	Apply for program - $100 fee; individually tailored written exam; submit 20 images for review Apply for program - $100 fee; written exam, submit 20 images for review Same as above
2. Evidence Photographers International Council (EPIC) EPIC Board Certified Evidence Photographer (BCEP) EPIC Board Certified Crime Scene Photographer (BCEP) EPIC Board Certified Fire & Arson Photographer	Civil Evidence Photography Law Enforcement Photography	Member of EPIC; attend minimum of 1 EPIC class; $150 application fee, submit 10 cases for review, interview, written exam, and give lecture or write an article
3. National Council for Skill Standards in Graphic Communications National Council Certified Operator (NCCO) Sheetfed Offset Press Operator's Multi-Color Certification Web Offset Press Operator's Multi-Color Certification Note: The numerous Graphic Arts software certifications are not included.	Sheetfed Offset Press Operator Web Offset Press Operator	Nat. Council Skill Standard Certification Exam; minimum 5 yrs. F/T operating experience; 2 ½ yrs. as lead in pressroom; employer letter re: past experience Note: Vendor specific pre-employment exams are also used in Graphic Arts..
4. No certification / licensure required.	Actor, Performer, Coach or Director	Formal dramatic training at an acting conservatory, college or university program – earn Bachelor's or Master of Fine Arts degree in communications, film, theater, drama, or broadcasting

GRANTING AGENCY and NAME OF CERTIFICATE / LICENSE	TYPE OF SPECIALTY OR CAREER	REQUIREMENTS
5. Flexographic Technical Assn.		
Basic Flexographer – Level I	Entry Level Press Operator	National Council of Skill Standards (NCSS) exam
Flexo Press Operator – Level II	Flexo Press Operator	NCSS exam; 2 yrs. press experience; technical skills of printer assistant
Accomplished Flexo Press Operator - Level III	Accomplished Flexo Press Operator	NCSS exam; 3 ½ yrs. printing press experience (press operations, converting & plate mounting & knowledge of process color)
Expert Flexo Press Operator – Level IV	Expert Flexo Press Operator	NCSS exam; 5 yrs. lead press experience
National Council Certified Operator (NCCO) Flexographic Press Operator's Multi-Color Certification	Flexographic Press Operator	NCSS certification exam; minimum 5 yrs. F/T operating experience; 2 ½ yrs. as lead in pressroom; employer letter regarding past work experience
6. United Scenic Artists, Local 829 *Professional Membership: Western Region*		
Scenic Designer	Scenic Artist	Work experience in the field preferred; resume & file appl. form; 2 types of possible exams; no exam given in the Western Region
Costume Designer	Costume Designer	Work experience in the field preferred; initiation fee; resume & appl. form filed; 2 types of possible exams
Lighting Designer	Lighting Designer	Same as above
United Scenic Artist Apprentice	Scenic Artist Apprentice	Obtain form from New York United Scenic Artist Office; prior experience needed; must be recommended by minimum 2 United Scenic Artist 829 members who serve as advisors; develop design apprentice portfolio

GRANTING AGENCY and NAME OF CERTIFICATE / LICENSE	TYPE OF SPECIALTY OR CAREER	REQUIREMENTS
7. Society of Broadcast Engineers Certified Television Operator (CTO)	Television Operator	Passing grade on proficiency exam – based on Television Operator's Certification Handbook
Certified Broadcast Technologist (CBT)	Broadcast Technologist	Passing grade on proficiency exam; hold valid FCC General Class license for minimum 2 yrs.
Certified Broadcast Networking Technologist (CBNT)	Broadcast Networking Technologist	Passing grade on proficiency exam; must be currently employed in the field
Certified Broadcast Engineer (CBRE, CBTE or CBRTE) with Special Endorsements: AM/FM and TV	Broadcast Engineer in Radio Broadcast Engineer in Television	Passing grade on proficiency exam; 5 yrs. experience in broadcast engineering or related technology, plus educational background considered.
Certified Audio/Video Engineer (CEA or CEV)	Audio or Video Engineer	Passing grade on proficiency exam; 5 yrs. experience in audio/video engineering or a related technology, plus educational background considered.
Certified Senior Broadcast Engineer (CSRE, CSTE or CSRTE)	Senior Broadcast Engineer in Radio Senior Broadcast Engineer in Television	Passing grade on proficiency exam; 10 yrs. experience in broadcast engineering or related technology, plus educational background considered.
Certified Professional Broadcast Engineer (CPBE)	Professional Broadcast Engineer	Passing grade on proficiency exam; 20 yrs. experience as professional broadcast engineer or possess related technology experience in radio/TV; educational credits not considered; plus 3 letters of reference and candidate's personal certification statement
8. No certification / licensure required	Print & Broadcast Journalist, Reporter, Editor, or Publisher	Bachelor's degree in journalism preferred, but consider other majors; additional subject matter specialties preferred in a large city; writing & reporting work experience & internships preferred

GRANTING AGENCY and NAME OF CERTIFICATE / LICENSE	TYPE OF SPECIALTY OR CAREER	REQUIREMENTS
9. State Licensure Agencies or Boards: State of Louisiana: LA. State Radio and TV Technicians Licensing Board Radio and TV Technician Commonwealth of Massachusetts: Board of Registration of Radio & Television Technicians Radio and Television Master Technician Radio and Television Technician	Radio and Television Technicians Radio and Television Master Technician Radio and Television Technician	**Varied information available; some states have licensure requirements – sample states noted**; Licensing requirements set by State Board to fix & repair radio and television equipment. Experience - 2,000 hrs. in the repair and maintenance of radio & television receivers through education or work; exam required Supervision required by a Master Technician; exam required
10. Society for Service Professionals in Printing Certified Printing Service Specialist (CPSS)	Printing Service Specialist	Minimum of 2 yrs. in printing industry with main function customer service & support; Passing grade on exam – recommend use of Printing Service Specialist's Handbook & Reference Guide or study groups assisted by the Society
11. Computing Technology Industry Association (CompTIA) CDIA + Certification (internationally recognized credential) Certified Document Imaging Architect	Document Imaging Document Management	Passing grade on exam; covers technologies used to plan, design & specify an imaging system Note: The association offers a variety of certifications relative to this career cluster.
12. Electronics Technicians Association – International Certified Master Electronics Technician Certified Senior Electronics Technician Certified Journeyman Electronics Tech. Certified Associate Electronics Technician	Electronics Technician Journeyman Electronics Technician Associate Electronics Technician Video Journeyman Satellite Installer Journeyman Telecommunications Journeyman	Areas: Electronics, Fiber Optics /Data Cabling, Satellite, Computers and FCC certification; Varied areas of Journeyman options; Assoc. certification only valid 2 yrs.; Need passing grade on certification exam with prep from ETA Chapters & technical colleges

Section VII – Validation Overview/ Results

Arts, Audio Video Technology and Communications Cluster
Validation Synopsis

After research and development of the Foundation and Pathway Knowledge and Skills, the validation process included three phases to obtain both qualitative and quantitative information. Phase one included a review and general comments in regional meetings at major cities and local pilot sites for business, industry and education partners of the Arts, Audio-Video Technology Career Cluster. Phase two addressed the content and appropriateness of the drafted Foundation and Pathway Knowledge and Skills. This phase was conducted by the nine national pilot sites and their state and local partners. Phase three included additional regional and national meetings of business and industry field experts listed on the attached page. This group incorporated information obtained from phases one and two and made suggestions for revision on the content.

National Skill Standards
Validation Session Participants
September 27, 2002

Audio, Video, and Film

Terrence A. Donnelly
10678 E. Cinnabar Ave.
Scottsdale, AZ 85258
480 314-5477
TERNDEB1@msn.com

Michael Sullivan
Studio 522
5125 N. 16th St.
Ste. A106
Phoenix, AZ 85016
602 745-2400
Mike@Studio522.com

Rhonda Olson
Rhonda Graphics
1730 E. Northern Ave. #204
Phoenix, AZ 85020
602 371-8800
Rhonda@Rhonda.com

Johnny Dust
Director
7328 E. Laredo Ln.
Scottsdale, AZ 85250
480 483-6008 ext. 104
Jdustaz@aol.com

Journalism and Broadcasting

Paul Matthews
Arizona Republic
200 E. Van Buren St.
Phoenix, AZ 85004
602 444-4480
Paul.Matthews@ArizonaRepublic.com

Jennifer Creeger
KPHO-TV
4016 N. Black Canyon Hwy.
Phoenix, AZ 85017
602 650-5521
jcreeger@mdp.com

Dr. Frederic "Fritz" Leigh
Associate Director
Walter Cronkite School of Journalism and Mass Communications
Arizona State University
P.O. Box 871305
Tempe, AZ 85287-1303
480 965-5011
Frederic.Leigh@ASU.edu

Robert A. Valencia
KTAR
5300 N. Central Ave.
Phoenix, AZ 85012
602 274-6200
RVALENCIA@KTAR.com

Joyce Valdez
Public Information Officer
City of Phoenix
Parks and Recreation
200 W. Washington St.
16th Floor
Phoenix, AZ 85003
602 262-4996
joyce.valdez@phoenix.gov

Bob Early
Editor
Arizona Highways
2039 W. Lewis Ave.
Phoenix, AZ 85009
602 712-7011
Bearly@DOT.state.AZ.US

National Skill Standards
Validation Session Participants
September 27, 2002

Telecommunications

Mark Gilbert
Qwest
7145 E. 1st St.
Scottsdale, AZ 85225
Mdgilb2@qwest.com

Dan Sierra
6531 N. 3rd Ave. #12
Phoenix, AZ
DKSierra@aol.com

Sheri Clifton
8734 W. Camino De Oro
Peoria, AZ 85383
SLClifton@msn.com

Rick Lehinten
Cisco Network Academy
2375 E. Camelback Rd.
Ste. 220
Phoenix, AZ
602 778-2500
RLEHINTEN@hotmail.com

Xenia Giese
Cisco Network Academy
2375 E. Camelback Rd.
Ste. 220
Phoenix, AZ
602 778-2500
XGIESE@cisco.com

Maryann Noto
300 N. Stanley
Chandler, AZ 85236
MENOTO@aol.com

Edward Osborne
ENE
1402 W. Cheyenne
Phoenix, AZ
osborne@cybertroils.com

Performing and Visual Arts

Virginia Ludders
Glendale Community College
6000 W. Olive Ave.
Glendale, AZ 85302
virginia.ludders@gcmail.maricopa.edu

Lynn Monson
Carmel Community Arts and Technical
97 W. Oakland St.
Chandler, AZ 85225
480 899-6600
lmonson@cox.net

Diane Anderson-Nickel
Hamilton School
647 N. Santa Anna
Mesa, AZ 85201
diannean@fastq.com

John C. Faris
4312 W. Royal Palms Rd.
Glendale, AZ 85302
623 937-2521
jcfaris@earthlink.net

Lisle Soukup
Arizonans for Cultural Development
514 W. Roosevelt
Phoenix, AZ 85003
acdlisle@qwest.net

Chris Hulett
Scottsdale Unified School District
3871 N. 44th St.
Phoenix, AZ 85018
602 952-6100
chulett@susd.org

Jocelyn Hanson
Phoenix Arts Commission
200 W. Washington
10th Floor
Phoenix, AZ 85003
jocelyn.hanson@phoenix.gov

National Skill Standards
Validation Session Participants
September 27, 2002

Performing and Visual Arts (Continued)

Andre Licardi
Peoria Unified School District
6330 W. Thunderbird
Glendale, AZ 85306
alicardi@peoriaud.K12.az.us

Lynn Tuttle
Arizona Community Foundation
2212 E. Highland Ave.
Ste. 400
Phoenix, AZ 85016
602 381-1400
ltuttle@azfoundation.org

Joyce M. Jackson
Estrella Mountain Community College
3000 N. Dysart Rd.
Avondale, AZ 85323-1000
623 935-8000
joyce.jackson@emcmail.maricopa.edu

Rod Freeman
Estrella Mountain Community College
3000 N. Dysart Rd.
Avondale, AZ 85323-1000
623 935-8000

Cindy Brown
4225 N. 36th St. #21
Phoenix, AZ 85018
cindy.brown@ad.state.az.us

Bob Galloway
Mesa Community College
Art Department
1833 W. Southern Ave.
Mesa, AZ 85202
robert.galloway@mcmail.maricopa.edu

Jackie Alling
Arizona Alliance for Arts Education
P.O. Box 44065
Phoenix, AZ 85064
602 264-0299
idjra@aol.com

Section VIII – Assessment Protocol
Certification Protocol

Deliverable #7
Title: Protocol for Career Clusters Assessment
8/5/2002 4:00 PM

Definition of Career Clusters Assessment

Assessment, within the context of the Career Clusters Initiative, is defined as *a **measurement** of what a learner should know and be able to do*. The academic and technical knowledge and skills common to all occupations and pathways within a single cluster are initially addressed in the Career Clusters Initiative. Each cluster measures or assesses a learner's knowledge and skills related to the cluster.

Purpose of the Protocol for Career Clusters Assessments

The purpose of this document is to provide:

- Minimum criteria for selecting existing assessment instruments that align to the academic and technical knowledge and skills identified for each cluster.
- Minimum criteria for developing new assessment instruments that align to the academic and technical knowledge and skills identified for each cluster.
- Minimum criteria for validating and determining reliability of assessment instruments.

Functions of Career Clusters Assessment

Career Cluster Assessment serves to

- *measure* (assess) *student achievement*, both cognitive and performance, in areas of academic and technical knowledge and skills for each cluster
- *provide the basis* for a transportable, industry-endorsed certification.

Operational Guidelines for Career Clusters Assessment

This protocol includes minimum criteria/expectations career cluster designers need to apply in the selection/development of assessment modalities. Career clusters assessment:

CONTENT

- measures all 10 Foundation knowledge and skills.
- customizes context of questions and applications to individual clusters.
- reflects a high degree of specificity of measurable knowledge and skills.
- aligns to academic standards.
- connects to post high school standards and competencies.
- is consistent with Perkins data-quality criteria.

FORM

- combines a minimum of two modalities: cognitive and performance.
- includes an item bank that can accommodate multiple applications.
- reflects quality design and clear formats.

APPLICATIONS AND USES

- offers diagnostic feedback to the learner.
- provides added value to the user (employer, post high school); not required for employment.
- affords portability of results.
- provides cues for instruction.

ADMINISTRATION

- validates identity of test takers through a secure system.
- affords flexible administration, e.g. single assessment per foundation cluster topic or combination of topics.
- provides flexible timing for administration.
- affords no cost or low cost to students.
- includes an affordable, user-friendly process to cover administrative costs.
- reflects an administration process that is as consistent as possible with other career cluster assessments.
- includes an affordable, user-friendly maintenance process.

VALIDITY AND RELIABILITY

- uses consistent, reliable, and technically strong elements.
- is recognized by business and industry.
- is recognized by post high school education and training.

Deliverable #8
Title: Protocol for Career Clusters Certification
8/23/2002 2:28 PM

Definition of Career Clusters Certification

Certification, within the context of the States' Career Clusters Initiative, *documents* learner achievement of the academic and technical knowledge and skills common to all pathways and occupations within a cluster. It is based on valid and reliable assessments. A certificate is recognized by employers, secondary education, and post high school education as "value added to the admissions process to further education, immediate employment process, and/or to employment advancement".

Purposes of the Protocol for Careers Cluster Certification

The purposes of this document are to provide:

- Minimum criteria for selecting existing certification programs that align to the academic and technical knowledge and skills identified for each cluster.
- Minimum criteria for developing new certification programs that align to the academic and technical knowledge and skills identified for each cluster.
- Minimum criteria for determining the value of a certification program.

Functions of Career Clusters Certification

Career Cluster Certification serves to provide a consistent, transportable method of documenting learner achievement of a Career Cluster's validated academic and technical knowledge and skills. The system is based on valid and reliable assessments.

Operational Guidelines for Career Clusters Certification

This protocol includes minimum criteria/expectations career cluster designers need to apply in the selection/development of certification processes. Career clusters certification:

- Defines the purpose and scope of the certificate.
- Bases issue of the certificate on assessed learner proficiencies and competencies related to a Career Cluster's validated academic and technical knowledge and skills.
- Requires learner to meet the assessment benchmark identified.
- Informs the public concerning the knowledge and skills of the certificate holder.
- Indicates date of issue on the certificate.
- Issues certificate from the State (State Director of Career-Technical Education or appropriate designee) if the issuing organization is a secondary or post secondary education institution.
- Issues certificate from the CEO (or an appropriate designee) of an issuing professional organization/agency/institution/company.
- Requires issuing organization to maintain a database (state and/or national) of certificate holders based on the respective term of renewal.

National Association of State Directors
of Career Technical Education Consortium
©2003

www.careerclusters.org

Revised June 2003