Preface

This report provides the results of a comparison between the workplace basic skills defined by the Secretary's Commission on Achieving Necessary Skills (SCANS) and skill frameworks developed by a variety of national and international organizations. The comparison found a great degree of commonality in the skill definitions. Therefore, the research yielded a comprehensive common language for the discussion and examination of workplace basic skills. The report is intended to serve as a guide for human resources personnel, trainers, educators, and researchers who are interested in workplace basic skills training.

This research also expanded the applicability of the skill definitions by developing behaviorally-anchored scales for each skill. These scales can serve as a common standard and reference point for workers, employers, trainers, educators, and program administrators as they consider work-related activities including the following:

- Identifying the skills and skill levels required for employment
- Approximating the skill levels of current or future workers
- Identifying the skill development that will help match workers to job requirements
- Describing individual skills as part of a job transition process
- Identifying valid assessments for measuring workplace readiness
- Using a hierarchical taxonomy of skills for facilitating the development of individual training plans, and for preparing and developing employment training programs

O*NET is currently being developed by the U.S. Department of Labor to replace the Dictionary of Occupational Titles (DOT, U.S. Department of Labor, 1991). Because O*NET is a major framework for describing workplace skills, this report provides crosswalks and links from the SCANS skill definitions and scales to relevant O*NET skill definitions and scale anchors. The O*NET–SCANS crosswalks facilitate an understanding of the features that are shared by the two frameworks and that are central to current U.S. workforce-related educational and training initiatives.

The attainment of workplace readiness skills is a core element of the Workforce Investment Act (WIA). States and local areas are required to provide workforce preparation and training for adults and youth to meet the requirements of WIA Title I, Adult Education and Family Literacy, and Perkins Vocational and Technical Education programs. They need to measure workplace readiness, basic, academic, and technical skills in order to improve programs and support their accountability systems for assessing participant performance. They can use this report as a reliable reference as they develop standards and identify workplace competency assessments.

The synthesis of the workplace essential skill definitions, skill level descriptions, and associated assessments provided in this report, represent a "roadmap" for states that are incorporating workplace readiness skills into their vocational and technical education or adult education programs.

Local providers of workforce investment services, vocational and technical education, and adult education will also find these frameworks and assessments useful to their local program development and improvement goals.

Figure 1: SCANS Framework
ESSENTIAL WORKPLACE SKILLS

Workplace Competencies

Resources
Allocates Time
Allocates Money
Allocates Materials and Facility Resources
Allocates Human Resources

Information
Acquires and Evaluates Information
Organizes and Maintains Information
Interprets and Communicates Information
Uses Computers to Process Information

Interpersonal
Participates as a Member of a Team
Teaches Others
Serves Clients/Customers
Exercises Leadership
Negotiates to Arrive at a Decision
Works with Cultural Diversity

Systems
Understands Systems
Monitors and Corrects Performance
Improves and Designs Systems

Technology
Selects Technology
Applies Technology to Task
Maintains and Troubleshoots Technology

Foundation Skills

Basic Skills
Reading
Writing
Arithmetic and Mathematics
Listening and Speaking

Thinking Skills
Creative Thinking
Decision Making
Problem Solving
Seeing Things in the Mind's Eye
Knowing How to Learn
Reasoning

Personal Qualities
Responsibility
Self-Esteem
Social
Self-Managemen
Integrity/Honesty

Allocates Time

SCANS Definition: Selects relevant, goal-related activities, ranks them in order of importance, allocates time to activities, and understands, prepares, and follows schedules.

Demonstrating competence includes properly identifying tasks to be completed; ranking them in order of importance; developing and following an effective, workable schedule based on accurate estimates of such things as importance of tasks, time to complete tasks, time available for completion, and task deadline; avoiding wasting time; and accurately evaluating and adjusting a schedule. (p. 9)

SCANS Scales:

Level 5	Coordinates timing of activities across projects and/or processes. Adjusts multiple schedules for organizational effectiveness and/or profitability.
Level 4	Establishes deadlines and task schedules for a project or process involving multiple tasks and work units. Evaluates and adjusts schedules as necessary.
Level 3	Establishes deadlines and task schedules for others within own work unit for group toward complex effectiveness and/or profitability. Determines sequence and importance of work unit's tasks.
Level 2	Determines sequence and importance of own tasks. Adjusts order and length of tasks.
Level 1	Performs own tasks in a specified order within time limits. Uses time efficiently to as needed to meet deadlines and produce desired outcomes. Looks ahead in order to adjust time given to specific tasks, adjusting speed as necessary to improve performance. (p. 10)

Allocates Money

SCANS Definition: Prepares budgets, makes cost and revenue forecasts, keeps detailed records to track budget performance, and makes appropriate adjustments.

Demonstrating competence includes accurately preparing and using a budget consistent with accounting methods, accurately calculating future budgetary needs based on projected costs and revenues, accurately tracking the extent to which actual costs and revenues differ from the estimated budget, and taking appropriate and effective actions. (p. 16)

SCANS Scales:

Level 5	Develops and governs a financial plan for an organization, including projecting organizational revenue verses costs over time, distributing funding to departmental or project budgets, allocating revenue to financial investments for projected purposes, and evaluating financial risks of new products or business ventures.
Level 4	Makes cost and revenue projections for several multiple-task projects, and develops budgets within those parameters. Evaluates and adjusts budgets as necessary based on revised cost and revenue projections.
Level 3	Makes cost and revenue projections for a single multiple-task project, and develops a budget within those parameters. Evaluates and adjusts budget as necessary based on revised cost and revenue projections.
Level 2	Tracks expenditures relative to a budget; makes adjustments as necessary and/or informs superiors of potential problems. Within a specified allocation, estimates costs for specific activities. Adjusts priorities based on evaluation of costs within a specified budget.
Level 1	Performs and records a cash transaction, including determining the amount of the transaction, receiving payment from a client/customer or obtaining funds from an account, making or receiving the correct change, and recording the transaction either by using a cash register or filing a receipt according to procedures. (p. 17)

Allocates Materials and Facility Resources

SCANS Definition: Acquires, stores, and distributes materials, supplies, parts, and equipment, space, or final products to make the best use of them.

Demonstrating competence includes carefully planning the steps involved in the acquisition, storage, and distribution of resources; safely and efficiently acquiring, transporting, or storing them; maintaining them in good condition; and distributing them to the end user. (p. 22)

SCANS Scales:

Level 5	Defines business processes or financial rules for the allocation of materials. Designs complex workstations involving multiple systems. Evaluates specifications of new equipment or materials for compatibility or integration into existing environment.
Level 4	Coordinates the acquisition and use of materials or facilities across multiple projects, assuring that proper storage and maintenance are available. Monitors the use of materials and facilities to ensure that they are being used efficiently and that project demands are being met. Distributes materials and facilities across projects.
Level 3	Determines the materials or facilities needed for a multiple-task project. Identifies the sources and costs of materials or facilities. Designs storage plans and distribution methods for materials, and coordinates their use within projects.
Level 2	Determines the type and quantity of materials or facilities needed to complete a work task. Follows a distribution plan. Obtains facility resources according to a work plan. Stores and maintains per specifications.
Level 1	Obtains, stores, and/or delivers specific materials as specified in a work plan. (p. 24)

Allocates Human Resources

SCANS Definition: Assesses knowledge and skills and distributes work accordingly, evaluates performance, and provides feedback.

Demonstrating competence includes accurately assessing an individual's knowledge, skills, abilities, and potential; identifying present and future workloads; making effective matches between individual talents and workload; and actively monitoring performance and supplying feedback. (p. 29)

SCANS Scales:

Level 5	Determines individuals' potential for learning and accomplishing unfamiliar tasks and activities. Makes hiring decisions based on estimates of applicants' potential to meet job demands. Assigns individuals to training programs based on estimated potential and learning needs.
Level 4	Determines individuals' ability to perform a variety of complex tasks. Assigns people to work on multiple-task projects that require minimal supervision. Provides feedback to individuals regarding their performance in managing projects.
Level 3	Determines individuals' ability to perform specific tasks by observing them perform the tasks or similar tasks. Identifies areas of deficiency to recommend further development and training.
Level 2	Assigns or reassigns people to tasks based upon their known skills and abilities. Provides feedback to individuals regarding their performance on tasks.
Level 1	Assigns individuals from a pool of qualified workers to single tasks based upon their availability. Assigns oneself to tasks based on self-assessment of skills, task, and workload. (p. 30)

Acquires and Evaluates Information

SCANS Definition: Identifies need for data, obtains them from existing sources or creates them, and evaluates their relevance and accuracy.

Demonstrating competence includes posing analytic questions to determine specific need for information, selecting possible information and evaluating its appropriateness, and determining a need for new information. (p. 34)

SCANS Scales:

Level 5 — Judges the quality, importance, pertinence, and authenticity of information drawn from diverse sources. Reorganizes existing information to create new sources if necessary sources do not exist.

Level 4 — Evaluates information that contains specialized technical terms or has a complex structure and composition (such as information of a legal, scientific, engineering, or academic nature). Identifies tendencies and patterns in data and/or comparing information.

Level 3 — Evaluates information from sources such as reports, tabular data, forms, maps, diagrams, and interviews for accuracy, significance, and/or relevance. Identifies and corrects discrepancies and errors.

Level 2 — Locates information within existing sources by conducting searches, including internet and library searches. Skims and examines sources to locate specific information.

Level 1 — Retrieves information according to a plan from existing sources such as standard business forms, reports, invoices, books, etc. (p. 38)

Organizes and Maintains Information

SCANS Definition: Organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion.

Demonstrating competence includes understanding and organizing information from computer, visual, oral, and physical sources in readily accessible formats (e.g., computerized databases, spreadsheets, microfiche, videodiscs, paper files); and transforming data into different formats to organize them by the application of sorting, classifying, or more formal methods. (p. 45)

SCANS Scales:

Level 5 — Aligns information or data to multiple business needs or goals. Links data between similar or dissimilar projects or processes.

Level 4 — Transforms data into different formats for the purpose of organizing and storing it. Aligns information or data to business needs or goals.

Level 3 — Develops structures for organizing information in computer and physical formats (e.g., for checking accuracy of data, computerized databases, spreadsheets, microfiche, videodiscs, paper files).

Level 2 — Classifies and/or categorizes information. Modifies an existing information storage structure to improve its functionality. Identifies which information needs to be secure and which does not.

Level 1 — Sorts and organizes information within given categories. Files and locates information using simple and direct methods such as alphabetical and numerical codes. Maintains information so that it is accurate and easy to locate. (p. 47)

Interprets and Communicates Information

SCANS Definition: Selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multimedia methods.

Demonstrating competence includes determining the information to be communicated, identifying the best methods to present the information (e.g., overheads, handouts), and converting the information to a desired format when conveying it to others (e.g., oral, written). (p. 51)

SCANS Scales:

Level 5 — Extrapolates information when it is not immediately obvious or entirely known.

Level 4 — Communicates judgments about the quality and uses of data. Communicates data for making decisions. Explains complex information in understandable terms so that it can be received and understood by different audiences.

Level 3 — Analyzes information across multiple sources and makes an integrated presentation.

Level 2 — Interprets and presents information from multiple sources in oral or written form. Selects the most important issues in each and presents them in a useful way. Selects appropriate format for communicating and displaying information (such as line graphs, bar graphs, tables, pie charts, narrative documents, and/or graphics).

Level 1 — Interprets and presents information from one source in oral or written form. (p. 53)

Uses Computers to Process Information

SCANS Definition: Employs a computer to acquire, organize, analyze, and communicate information.

Demonstrating competence includes entering, modifying, retrieving, storing, and verifying data and other information; choosing a format for displaying information (e.g., line graph, bar graph, tables, pie charts, narrative); and ensuring the accurate conversion of information into a chosen format. (p. 58)

SCANS Scales:

The panel recommends this competency be embedded in other SCANS competencies where appropriate. The behaviors of "acquiring, organizing, analyzing, and communicating information" in this competency are covered in the other information competencies, as well as the technology competencies, whether or not a computer is used to perform the tasks. Since there are not special categories for other specific tools or technology, this appears to be a reasonable action. However, the panel does acknowledge that familiarity with computer operations and keyboarding are important skills in the workplace.

On the recommendation of the panel, a scale was not developed for this competency. (p. 59)

Participates as a Member of a Team

SCANS Definition: Works cooperatively with others and contributes to group with ideas, suggestions, and effort. (p. 64)

Demonstrating competence in participating as a member of a team includes doing own share of work necessary to complete a project; encouraging team members by listening and responding appropriately to their contributions; building on individual team members' strengths; resolving differences for the benefit of the team; taking personal responsibility for accomplishing goals; and responsibly challenging existing procedures, policies, or authorities. (p. 64)

SCANS Scales:

Level 5   Establishes and maintains teams. Links team with management and with the overall goals of the organization.

Level 4   Acts as a facilitator and works to maintain the team. Builds on individual team members' strengths. Eases tension and builds cooperation. Resolves differences for the benefit of the team.

Level 3   Acts as a team-builder and consensus-builder. Helps identify the mission and goals of the team. Encourages team members by listening and responding appropriately to their contributions.

Level 2   Operates as an active member of the team. Contributes to the team with ideas, suggestions, and effort. Participates in team decision-making. Follows rules and procedures set by team. Supports actions taken by team.

Level 1   Works cooperatively with others on a team. Takes responsibility for doing own share of work necessary to complete a project. (p. 68)

Teaches Others

SCANS Definition: Helps others learn.

Demonstrating competence in teaching others includes helping others to apply related concepts and theories to tasks through coaching or other means; identifying training needs; conveying job information to allow others to see its applicability and relevance to tasks; and assessing performance and providing constructive feedback/reinforcement. (p. 71)

SCANS Scales:

Level 5   Acts as a mentor and works to further others' careers by promoting their professional and personal development.

Level 4   Coaches co-workers and/or subordinates on all parts of their jobs. Helps others to apply related concepts and theories to tasks. Determines learning needs of others and recommends appropriate training programs.

Level 3   Teaches others in multiple-step tasks. Assesses overall job performance and offers constructive feedback.

Level 2   Conveys job information to allow others to see its applicability and relevance to tasks. Assesses performance on a series of tasks and offers feedback.

Level 1   Teaches a familiar task to inexperienced co-workers through methods such as demonstration and explanation. Assesses performance on a specific task and offers immediate feedback. (p. 72)

Serves Clients/Customers

SCANS Definition: Works and communicates with clients and customers to satisfy their expectations.

Demonstrating competence in serving clients and customers includes actively listening to customers to avoid misunderstandings and identifying needs; communicating in a positive manner especially when handling complaints or conflict; efficiently obtaining additional resources to satisfy client needs. (p. 78)

SCANS Scales:

Level 5   Deals with complex client needs involving major problems or clients with difficult behaviors.

Level 4   Anticipates client/customer needs and makes recommendations for improvements.

Level 3   Analyzes and evaluates clients'/customers' existing and future needs. Establishes productive relationships. Makes proposals in oral or written form.

Level 2   Exceeds client/customer expectations of service. Resolves client/customer problem within corporate or organizational culture.

Level 1   Meets minimum client/customer expectations. Knows where to go for help or where to refer client/customer. (p. 79)

Exercises Leadership

SCANS Definition: Communicates thoughts, feelings, and ideas to justify a position; encourages, persuades, convinces, or otherwise motivates an individual or groups, including responsibly challenging existing procedures, policies, or authority.

Demonstrating competence in exercising leadership includes making positive use of the rules/values followed by others; justifying a position logically and appropriately; establishing credibility through competence and integrity; and taking minority viewpoints into consideration. (p. 84)

SCANS Scales:

Level 5   Inspires and guides the development of organizational vision, mission, and goals.

Level 4   Connects group with other groups and with the larger mission of an organization. Creates a cooperative atmosphere. Overcomes obstacles and responsibly challenges existing procedures, policies, or authority.

Level 3   Takes responsibility for a group of people to accomplish goals. Inspires and guides others and delegates as necessary. Inspires confidence and trust.

Level 2   Persuades, convinces, or motivates an individual to adopt a point of view, make changes, or take action. Logically communicates thoughts, feelings, and ideas to justify a position.

Level 1   Serves as a role model by accepting responsibility for own actions. (p. 87)

Negotiates to Arrive at a Decision

SCANS Definition: Works toward an agreement that may involve exchanging specific resources or resolving divergent interests.

Demonstrating competence in negotiating to arrive at a decision involves researching opposition and the history of the conflict; setting realistic and attainable goals; presenting facts and arguments; listening to and reflecting on what has been said; clarifying problems and resolving conflicts; adjusting quickly to new facts/ideas; proposing and examining possible options; and making reasonable compromises.

SCANS Scales:

Level 5   Facilitates negotiation to reach long-term goal-achieving decisions that require consensus.

Level 4   Performs a series of negotiations with a short-term goal in mind. "Sees through others' eyes" in order to understand their perspectives.

Level 3   Negotiates within a group setting. Sets realistic and attainable goals. Generates potential options for compromise.

Level 2   Negotiates with another employee or supervisor through discussion and compromise to reach a decision.

Level 1   Demonstrates a willingness to accept or accommodate another's position or point of view. (p. 92)

Interpersonal (continued)

Works with Cultural Diversity

SCANS Definition: Works well with men and women and with a variety of ethnic, social, or educational backgrounds.

Demonstrating competence in working with cultural diversity involves understanding one's own culture and those of others and how they differ; respecting the rights of others while helping them make cultural adjustments where necessary; basing impressions on individual performance, not on stereotypes; and understanding concerns of members of other ethnic and gender groups.

SCANS Scales:

Level 5	Promotes universal acceptance of all groups.
Level 4	Appreciates across-group similarities. Promotes acceptance of other groups within own group.
Level 3	Understands and respects the concerns of members of other groups. Makes a conscientious effort to adapt own behavior to accommodate people from other groups.
Level 2	Accepts differences between self and other groups with which one interacts. Demonstrates courtesy in interactions with people from other cultures.
Level 1	Works with others from different backgrounds and points of view to achieve workplace goals. (p. 99)

Systems

Understands Systems

SCANS Definition: Knows how social, organizational, and technological systems work and operates effectively within them.

Demonstrating competence in understanding systems involves knowing how a system's structures relate to goals; responding to the demands of the system/organization; knowing the right people to ask for information and where to get resources; and functioning within the formal and informal codes of the social/organizational system. (p. 100)

SCANS Scales:

Level 5	Can explain the relationship of one system to other systems. Demonstrates an understanding of the rules and procedures of other systems. Can link and use different systems together to reach a goal.
Level 4	Can explain logic behind system arrangement in other work areas or components. Demonstrates an understanding of system-wide rules and procedures.
Level 3	Relates one system's components to another's, applying appropriate rules and procedures from one part of a system to another. Can provide details about major components, input, and output.
Level 2	Follows rules and procedures for interacting in an organization. For example, knows how to get questions answered.
Level 1	Identifies a system and one's place within a system. Knows where to get information or help when necessary. (p. 104)

Monitors and Corrects Performance

SCANS Definition: Distinguishes trends and predicts the impact of actions on system operations, diagnoses deviations in the function of the system/organization, and takes the necessary action to correct performance.

Demonstrating competence includes identifying trends and gathering needed information about how the system is intended to function, detecting deviations from the system's intended purpose, troubleshooting the system, and making changes to rectify the system function and to ensure product quality. (p. 108)

SCANS Scales:

Level 5	Identifies trends in performance and determines actions to prevent potential systems problems. Predicts effects of performance in other systems.
Level 4	Implements corrective action.
Level 3	Determines whether system problems are caused by internal or external factors. Recommends solutions once causes are identified.
Level 2	Performs simple diagnostics to identify the primary or most likely cause of a problem in the system. Documents or reports findings.
Level 1	Monitors work activities or work station. Identifies an obvious system problem and reports it to the appropriate person. (p. 109)

Improves and Designs Systems

SCANS Definition: Makes suggestions to modify existing systems to improve products and services and develops new or alternative systems.

Demonstrating competence includes making suggestions and recommending alternative system designs based on relevant feedback, and responsibly challenging the status quo to benefit the larger system. (p. 113)

SCANS Scales:

Level 5	Designs and implements new systems. Tests systems and recommends alternative designs based on feedback.
Level 4	Makes recommendations for improving the overall system or the relationship between its components. Designs new components.
Level 3	Implements improvements and evaluates their effectiveness.
Level 2	Evaluates options and makes a recommendation for modifying and improving a major component or part in an existing system.
Level 1	Identifies a need for improvement in a major component or part of a system. (p. 114)

Selects Technology

SCANS Definition: Judges which set of procedures, tools, or machines, including computers and their programs, will produce the desired results.

Demonstrating competence in selecting technology includes determining desired outcomes and applicable constraints; visualizing the necessary methods and applicable technology; evaluating specifications; and judging which machine or tool will produce the desired results. (p. 118)

SCANS Scales:

Level 5 Conducts needs analyses and develops specifications for new technology based on the current project, desired outcome, costs, and personnel.

Level 4 Identifies and learns about innovations in technology to select technology that meets current and future requirements for several projects in the work area.

Level 3 Evaluates project specifications and determines which machines/tools will produce the desired results.

Level 2 Evaluates similar tools and machinery to select the best one(s) for a specific task.

Level 1 Selects the appropriate basic tools or simple machinery as directed based on instructions for a specific task. (p. 119)

Applies Technology to Task

SCANS Definition:: Understands the overall intent and the proper procedures for setting up and operating machines, including computers and their programming systems.

Demonstrating competence in how to apply technology to task includes understanding how different parts of machines interact and how machines interact with broader production systems; on occasion installing machines including computers; setting up machines or systems of machines efficiently to get desired results; accurately interpreting machine output; and detecting errors from program output. (p. 123)

SCANS Scales:

Level 5 Conceptualizes and designs high-level technology. Anticipates growth and the need for new and improved technology to meet needs.

Level 4 Modifies or makes a recommendation for modifying tools and/or machines to improve efficiency and performance.

Level 3 Adjusts and calibrates machines to improve output and to detect and/or eliminate errors.

Level 2 Uses multiple tools and/or machines to accomplish more than one task. Uses different common technologies. For example, uses a computer, voice mail, and electronic mail.

Level 1 Uses a single tool or machine to complete a single task. (p. 125)

Maintains and Troubleshoots Technology

SCANS Definition: Prevents, identifies, or solves problems in machines, computers, and other technologies.

Demonstrating competence in maintaining and troubleshooting technology includes identifying, understanding, and performing routine preventative maintenance and service on technology; detecting more serious problems; generating workable solutions to correct deviations; and recognizing when to get additional help. (p. 131)

SCANS Scales:

Level 5 Anticipates future problems, and develops and implements plans for preventing them. Determines major overhauls for equipment and/or supplies.

Level 4 Diagnoses problems and recommends solutions.

Level 3 Carries out repairs in correct sequence. Inspects and maintains major components. Detects defects in parts.

Level 2 Performs scheduled preventative maintenance on technology and corrects basic problems.

Level 1 Operates equipment properly and monitors for problems. Identifies obvious signs of malfunction, and notifies appropriate contact person. (p. 132)

Basic Skills

Reading

SCANS Definition: Locates, understands, and interprets written information in prose and documents—including manuals, graphs, and schedules—to perform tasks; learns from text by determining the main idea or essential message; identifies relevant details, facts and specifications; infers or locates the meaning of unknown or technical vocabulary; and judges the accuracy, appropriateness, style, and plausibility of reports, proposals, or theories of other writers. (p. 134)

SCANS Scales:

Level 5 Synthesizes specialized or highly technical documents in order to solve problems or perform analysis or evaluation.

Level 4 Simplifies and translates information from a complex document.

Level 3 Reads work-related documents such as technical manuals, budgeting reports, blueprints, schematics, and school-related documents such as textbooks and newspapers. Comprehends and identifies trends, patterns, or themes in information.

Level 2 Reads materials such as maps, work orders, sets of instructions, and memoranda needed to complete a task.

Level 1 Reads simple material such as basic instructions, directories, product labels, menus, phone messages, and signs to be informed or to learn. (p. 138)

Writing

SCANS Definition: Communicates thoughts, ideas, information, and messages in writing; records information completely and accurately; composes and creates documents such as letters, directions, manuals, reports, proposals, graphs, flow-charts; uses language, style, organization, and format appropriate to the subject matter, purpose, and audience; includes supporting documentation and attends to level of detail; and checks, edits, and revises for correct information, appropriate emphasis, form, grammar, spelling, and punctuation. (p. 143)

SCANS Scales:

Level 5 Creates documents, articles, and/or books involving complex subject matter, synthesizing information from multiple sources. Compares contrasting information. Incorporates technical information. Creates proposals and presentations. Performs content editing on complex documents.

Level 4 Writes reports on complex topics. Uses correct professional vocabulary and provides supporting documentation and notations.

Level 3 Composes and formats basic workplace documents such as letters, memoranda, informative reports, and school-related reports such as essays. Uses vocabulary, style, and tone that are appropriate for the audience. Copyedits others' writing.

Level 2 Records information accurately and completely. Writes standard English sentences using familiar workplace vocabulary. Communicates general meaning clearly.

Level 1 Records or copies information using simple phrases or lists of words in order to communicate basic information pertaining to work. For example, records a personal message or fills out a simple job application or time sheet. (p. 147)

Arithmetic and Mathematics

SCANS Definition:

Arithmetic: Performs basic computations; uses basic numerical concepts such as whole numbers and percentages in practical situations; makes reasonable estimates of arithmetic results without a calculator; and uses tables, graphs, diagrams, and charts to obtain or convey quantitative information.

Mathematics: Approaches practical problems by choosing appropriately from a variety of mathematical techniques; uses quantitative data to construct logical explanations for real world situations; expresses mathematical ideas and concepts orally and in writing; and understands the role of chance in the occurrence and prediction of events. (p. 154)

SCANS Scales:

Level 5 Uses calculus, probability, and/or statistics to solve workplace or organizational problems.

Level 4 Uses algebraic and/or geometric formulas or equations to solve workplace problems. Calculates measurements of complex or irregular geometric shapes.

Level 3 Converts familiar forms of fractions, decimals, or percentages from one form to another. Calculates units of measurement and perimeters and areas of basic geometric shapes. Calculates averages, simple ratios, proportions, and rates using large numbers that may contain decimals or fractions. Applies formulas to convert within or between systems of measurement. For example, converts hours to minutes or miles to kilometers.

Level 2 Uses positive and negative values. Performs multiplication and division. Uses tables, graphs, and diagrams to obtain quantitative information.

Level 1 Performs counting and simple addition and subtraction. (p. 160)

Listening and Speaking

SCANS Definition:

Listening: Receives, attends to, interprets, and responds to verbal messages and other cues such as body language in ways that are appropriate to the purpose (e.g., comprehend, learn, critically evaluate, appreciate, or support a speaker).

Speaking: Organizes ideas and communicates oral messages appropriate to listeners and situations; participates in conversation, discussion, and group presentations; selects an appropriate medium for conveying a message; uses verbal language and other cues such as body language appropriate in style, tone, and level of complexity to the audience and occasion; speaks clearly and communicates a message; understands and responds to listener feedback; and asks questions as necessary. (p. 167)

SCANS Scales:

Level 5 Chooses and organizes related ideas and presents them in an articulate and compelling fashion. Responds to vague or deceptive questions with diplomacy and differentiates between fictitious or emotional factors and the real facts. Detects and uses very subtle nonverbal cues. Uses vocabulary suitable to audience or communicant.

Level 4 Convinces by means of verbal and nonverbal strategies. Presents a specific subject to an audience and responds to questions. Expresses oneself using subtleties, humor, and nonverbal signs to communicate more effectively. Responds to negative or incomplete questions appropriately.

Level 3 Formulates questions and comments that may complement or add to the verbal information received in both interpersonal and group discussions. Interprets and responds to verbal communication, considering subtleties such as humor, tone of voice, and nonverbal signs. Enunciates correctly and uses inflection effectively.

Level 2 Verbalizes one's understanding of a series of instructions, expressing pertinent details and the general tone of a verbal message clearly. Makes routine oral reports according to preestablished instructions.

Level 1 Follows simple sequential instructions. Asks pertinent questions for clarification. Listens and reacts tactfully to communication. Interprets simple nonverbal cues such as tone of voice and facial expressions. (p. 174)

Creative Thinking

SCANS Definition: Uses imagination freely, combines ideas or information in new ways, makes connections between seemingly unrelated ideas, and reshapes goals in ways that reveal new possibilities. (p. 179)

SCANS Scales:

Level 5   Creates original applications or solutions that address overreaching problems or goals. Leads colleagues in generating ideas that bring about ideas from unrelated fields or applications.

Level 4   Creates original applications or solutions for a specific problem from the manipulation or transformation of ideas or objects. Leads others in generating ideas by initiating a string of thought or guiding a discussion.

Level 3   Connects or combines ideas or objects from unrelated fields or applications. Generates multiple ideas around a specific outcome or topic. Generates ideas independently and without censor.

Level 2   Manipulates or transforms ideas or objects from related fields or applications in new ways dismissing previous assumptions about their intended use and purpose. Participates with others in generating ideas. Delays judgement on the feasibility of ideas presented.

Level 1   Connects ideas or objects from related fields or applications to address an immediate problem or bring about a specific outcome. Follows only recognized guidelines for use and purpose. (p. 182)

Decision Making

SCANS Definition: Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative. (p. 187)

SCANS Scales:

Level 5   Identifies all sound alternatives. Defines complex consequences. For example, a decision that resolves one problem may have consequences in another area.

Level 4   Identifies multiple sound alternatives for making a decision. Defines consequences in terms of time, costs, outcomes, and effects on the work process.

Level 3   Makes a decision in a timely manner. Identifies multiple alternatives for making a decision, and identifies more than one consequence for each alternative. Makes a decision that affects a group of workers or a work process.

Level 2   Makes a decision that considers pre-established criteria with multiple alternatives. Makes a decision that affects another worker.

Level 1   Makes an "A or B" decision that affects only one's own work and activities. Identifies at least one consequence for each alternative. (p. 189)

Problem Solving

SCANS Definition: Recognizes that a problem exists, identifies possible reasons for the discrepancy, devises and implements a plan of action to resolve it, evaluates and monitors progress, and revises plans as revealed by findings. (p. 192)

SCANS Scales:

Level 5   Identifies and resolves a problem with causes that extend outside the immediate system. Analyzes current information or processes to identify areas of future problems. Plans and executes steps that require multiple sequences or schedules to resolve problems.

Level 4   Identifies and investigates less perceivable abnormalities that require obtaining further information from non-immediate sources and takes appropriates steps to resolve the problem. Adjusts actions during the resolution of a problem based on feedback.

Level 3   Identifies a sequence of events that causes a problem. Prioritizes and implements the steps necessary to resolve the problem events. Identifies and investigates easily perceived abnormalities that indicate something is likely to be wrong and takes actions to resolve the problems. Monitors actions taken to resolve a problem.

Level 2   Identifies the main source of a problem and follows set guidelines or procedures to resolve the problem. Follows up on the problem to assure that it is resolved correctly.

Level 1   Recognizes that a problem exists and informs appropriate contact person. (p. 196)

Seeing Things in the Mind's Eye

SCANS Definition: Organizes and processes symbols, pictures, graphs, objects, or other information (e.g., sees a building from a blueprint, a system's operation from schematics, and the flow of work activities from narrative descriptions). (p. 204)

SCANS Scales:

Level 5   Visualizes objects or processes from mathematical or scientific concepts and prepares a visual or verbal representation. From output data/information, visualizes processes or systems and identifies potential problems or malfunctions.

Level 4   Combines visual or verbal representations of an object or process obtained from different sources to create a three-dimensional mental picture. Visualizes yet-to-be-realized objects or processes and prepares a visual or verbal representation. Visualizes internal components and operations of machines or systems and predicts outcomes. Completes a mental picture from incomplete information.

Level 3   From a two-dimensional representation or a verbal description of an object or arrangement of objects, or a process or sequences of activities, creates a three-dimensional mental picture. Mentally operates or manipulates components of an object. Visualizes exact details of a specific object to distinguish from others. Mentally coordinates objects in a space with regards to size, color, function, and visual presentation.

Level 2   From a two-dimensional representation of an object or arrangement of objects, creates a two-dimensional mental picture with regards to obvious features that distinguish objects from one another, and the spatial relationship between objects. Uses mental picture to recognize the exact object in the future or to create the spatial arrangement of the objects. Manipulates a mental picture two dimensionally to make alterations to the spatial relationship of objects.

Level 1   By seeing a basic or familiar object, create a two-dimensional mental picture of the object with regards to basic shape and color. Uses mental picture to recognize similar objects in the future. (p. 205)

Knowing How to Learn

SCANS Definition: Recognizes and can use learning techniques to apply and adapt new knowledge and skills in both familiar and changing situations, and is aware of learning tools such as personal learning styles (e.g., visual, aural) and formal and informal learning strategies. (p. 210)

SCANS Scales:

Level 5   Applies knowledge from past experiences to understand new tasks. Applies multiple learning styles to a learning situation.

Level 4   Identifies general rules or patterns that govern a task or procedure and applies them to understand different, yet similar tasks or procedures. Determines among learning styles a style to suit a learning situation.

Level 3   Uses tools or aids, such as note taking, to learn a series of tasks or multiple-step procedure. Identifies an alternate learning style and organizes information to suit style.

Level 2   Uses active listening (listening and asking questions) to understand information or a task. Uses memorization and repetition to learn a series of tasks or multiple-step procedure. Identifies preferred learning style and organizes information to suit style.

Level 1   Uses memorization and repetition to learn a task. Applies knowledge from outcomes to revise or change behavior. (p. 213)

Reasoning

SCANS Definition: Discovers rules or principles underlying the relationship between two or more objects and applies it in solving a problem, uses logic to draw conclusions from available information, extracts rules or principles from a set of objects or written text, applies rules and principles to a new situation or determines which conclusions are correct when given a set of facts and a set of conclusions. (p. 214)

SCANS Scales:

Level 5   Deconstructs other positions in order to respond to them.

Level 4   Identifies weaknesses in own position. Anticipates opponents' positions.

Level 3   Uses conclusions from facts and principles to construct a position.

Level 2   After drawing conclusions from multiple observations, identifies a principle

Level 1   Draws a conclusion from a set of facts. (p. 217)

Responsibility

SCANS Definition: Exerts a high level of effort and perseverance toward goal attainment; works hard to become excellent at doing tasks by setting high standards, paying attention to details, working well, and displaying a high level of concentration even when assigned an unpleasant task; displays high standards of attendance, punctuality, enthusiasm, vitality, and optimism in approaching and completing tasks. (p. 224)

SCANS Scales:

Level 4   Exerts a high and consistent level of effort and perseverance toward goal attainment. Works to become excellent at doing tasks by setting high standards, paying attention to details, and displaying a high level of concentration even when assigned an unpleasant task.

Level 3   Accepts responsibility and consequences across work unit or level. Shows initiative for achieving goals. Applies the extra effort necessary for accomplishing a task.

Level 2   Acknowledges and accepts responsibility and consequences for self. Shows initiative and applies a consistent level of effort to achieve organizational goals. Keeps supervisor informed.

Level 1   Displays the minimum standards of the workplace for attendance, punctuality, proper attitude, and focus on task. Knows which responsibilities or problems should be referred to supervisor. (p. 228)

Self-Esteem

SCANS Definition: Believes in own self-worth and maintains a positive view of self, demonstrates knowledge of own skills and abilities, is aware of impact on others, and knows own emotional capacity and needs and how to address them. (p. 231)

SCANS Scales:

Level 4   Presents ideas even if they contradict the ideas of peers. Can separate constructive criticism of work from personal criticism. Seeks to improve oneself based on awareness of shortcomings.

Level 3   Presents own ideas to peers with confidence. Demonstrates full awareness of impact on others. Shows positive attitude at work. Has realistic knowledge of own shortcomings.

Level 2   Demonstrates minimum awareness of one's impact on others. Has realistic knowledge of own skills and abilities. Takes pride in level of effort and quality of accomplishments.

Level 1   Demonstrates a minimum awareness of own skills and abilities. (p. 232)

Social

SCANS Definition: Demonstrates understanding, friendliness, adaptability, empathy, and politeness in new and on-going group settings; asserts self in familiar and unfamiliar social situations; relates well to others; responds appropriately as the situation requires; and takes an interest in what others say and do. (p. 235)

SCANS Scales:

Level 4   Fosters social interaction between others. Demonstrates understanding, friendliness, adaptability, empathy, humor, and poise in unfamiliar situations. Embraces diverse settings and individuals. Operates either within or outside formal organizational role.

Level 3   Demonstrates understanding, friendliness, adaptability, empathy, humor, and politeness in familiar situations, responding **appropriately** to diverse individuals from inside and outside the organization. Initiates conversation with unfamiliar people. Takes an interest in what others say and do.

Level 2   Interacts with others in the work environment who are equal to, below, and above them in status. Responds in an acceptable manner to invitations for interaction. **Tolerates** the humor of others and differences of opinion and ideas. Resolves disagreement through rational discussions.

Level 1   Participates in a group setting without disrupting. Interacts with, listens to, and **tolerates** differences in others. Responds in an **acceptable** manner to social greetings and to the humor of others. [Emphasis added] (p. 239)

Self-Management

SCANS Definition: Assesses own knowledge, skills, and abilities accurately; sets well-defined and realistic personal goals; monitors progress toward goal attainment and motivates self through goal achievement; exhibits self-control and responds to feedback unemotionally and non-defensively; and is a self-starter. (p. 241)

SCANS Scales:

Level 4   Sets priorities and works with multiple responsibilities. Shows initiative and is a self-starter. Develops realistic and measurable work and career goals. Motivates self through continuous goal-setting and monitors progress toward goals. Exhibits self-control and responds to positive and negative feedback unemotionally.

Level 3   Plans and schedules own work activities in order to complete assignments on time. Demonstrates self-control and self-discipline in the face of workplace conflicts. Monitors own knowledge, skills, and abilities accurately to continue career growth.

Level 2   Conducts work activities with an understanding of workplace goals and culture. For example, completes assigned work. Demonstrates self-control in workplace interactions.

Level 1   Responds **appropriately** to supervision. Self-monitors and knows when to seek help. Demonstrates self-control in familiar, nonconflicting workplace situations. [Emphasis added] (p. 245)

Integrity/Honesty

SCANS Definition: Can be trusted, recognizes when faced with making a decision or exhibiting behavior that may break with commonly held personal or societal values, understands the impact of violating these beliefs and codes on an organization, self, and others, and chooses the ethical course of action. (p. 247)

SCANS Scales:

Level 4   Exhibits behaviors of honesty and integrity out of **commitment to social ideals**. Mentors others in issues of ethics and ethical behaviors. Operates in the spirit of the **greater social good** when fulfilling work and organizational responsibilities.

Level 3   Acts in accordance with the principles of civil law. Promotes ethical behaviors in others. Accepts and completes work responsibilities **out of duty to the organization and its goals**. Understands the **consequences of social and personal issues** (i.e., confidentiality) and **chooses a course of action to the benefit and welfare of others**.

Level 2   Abides by the rules of the workplace without being asked or directly supervised. Exhibits behaviors of honesty and integrity from **personal sense of right and wrong**. Completes personal work responsibilities out of personal sense of duty and pride in one's work.

Level 1   **Conforms** work behaviors **to supervisory and peer culture expectations**. **Simulates** behaviors of honesty and integrity in employment practices from observing the attitudes and behaviors of people with whom they have direct contact. Completes work responsibilities out of personal sense of **duty to immediate co-workers or supervisor**. [Emphasis added](p. 249)

Below is a sample (reduced) of a report card used for fourth graders in Tucson Unifed School District, Tucson, Arizona.

The U.S. Department of Labor's SCANS (Secretary's Commission on Achieveing Necessary Skills) standards are listed below under "**Social & Emotional Growth and Learner Qualities**" and "**Technology**." According to *Arizona Workplace Skills Rationale*, workplace skills "are designed to be integrated into the traditional curriculum taught in schools at all levels…"

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2002-2003 Report card — page 2 of 2

FOURTH GRADE PROGRESS REPORT
Elementary School
School Year 2002-2003

TUSD
Tucson Unified School District

Student:
Teacher:

Teacher's Phone Number:
Teacher's Email Address:

Scoring Guide

4 – Exceeds the Standard Demonstrates superior academic performance on content standards.	3 – Meets the Standard Demonstrates solid academic performance on content standards.
2 – Approaches the Standard Demonstrates partial understanding of the knowledge and skills required to meet the standard.	1 – Falls Far Below the Standard Demonstrates insufficient evidence of the knowledge and required skills to approach content standards.

X — Not addressed this grading period

Language Arts

	1st	2nd	3rd	4th
Reading	2			
Reading - Spanish	3			

• uses strategies to read and analyze texts
• draws conclusions and makes inferences
• summarizes events
• identifies the author's purpose and bias

	1st	2nd	3rd	4th
Language and Vocabulary	3			
Language and Vocabulary - Spanish	3			

• learns new vocabulary
• interprets communications

	1st	2nd	3rd	4th
Writing	2			
Writing - Spanish	3			

• uses the writing process to develop ideas, voice, organization, word choice, fluency, and conventions
• writes personal narratives, stories, reports, and essays
• uses correct spelling and grammar

	1st	2nd	3rd	4th
Research, Study and Presentation Skills	2			
Research, Study and Presentation Skills - S	3			

• plans and presents a multimedia presentation
• analyzes different types of visual media
• uses note-taking and test-taking skills
• uses technology to locate information

	1st	2nd	3rd	4th
Listening and Speaking	3			
Listening and Speaking - Spanish	3			

• listens for information and point of view
• expresses opinions
• prepares and delivers a formal speech
• demonstrates appropriate delivery skills

Comments:

Mathematics

	1st	2nd	3rd	4th
Number Sense	3			

• compares and orders numbers through one million
• adds, subtracts, multiplies, and divides to solve problems
• reads and writes numbers, fractions, and decimals

	1st	2nd	3rd	4th
Geometry	X			

• classifies and draws shapes with measured properties
• performs transformations
• solves problems using given formulas

	1st	2nd	3rd	4th
Probability	3			

• collects and analyzes data
• reads and creates graphs and charts
• determines probability through experiments
• finds the mean, median, and mode

	1st	2nd	3rd	4th
Measurement	3			

• measures length, volume, and weight in U.S. customary and metric units
• uses formulas to solve problems
• converts measurement units within a system

	1st	2nd	3rd	4th
Patterns	X			

• describes patterns and functions
• solves equations

	1st	2nd	3rd	4th
Mathematical Reasoning	3			

• designs a method for solving problems
• uses "if ... then" statements

Comments:

Content Standards

	1st	2nd	3rd	4th
Social Studies	3			

• describe the economic, social, cultural, and political past of Arizona
• describes the foundations of state & national government
• describes and locates the major features of the United States

	1st	2nd	3rd	4th
Science	2			

• conducts an experiment using the scientific method
• explores science concepts such as structure of organisms, energy, and composition of the earth

	1st	2nd	3rd	4th
Technology	3			

• use touch-typing and troubleshooting strategies to create and manage documents
• uses technology tools to create presentations, locate and analyze data, communicate with others & solve problems

	1st	2nd	3rd	4th
Foreign Language	3			
Health	3			
Physical Education	3			
Fine Arts	3			
Band	3			

Attendance

	1st	2nd	3rd	4th	Total
Days Present	41.5				41.5
Days Absent	.5				0.5
Tardy	0				0
Off Roll	0				0

Social & Emotional Growth and Learner Qualities

	1st	2nd	3rd	4th
Self-Directed Learner	3			

• sets achievable goals
• reviews progress
• takes responsibility for own actions

	1st	2nd	3rd	4th
Collaborative Worker	3			

• works well in groups
• has positive relationships with others
• works to achieve group goals

	1st	2nd	3rd	4th
Problem Solver	3			

• reasons
• identifies goals and makes decisions
• solves social and academic problems

	1st	2nd	3rd	4th
Responsible Citizen	3			

• chooses responsible courses of action
• participates in classroom and school community activities
• respects others

	1st	2nd	3rd	4th
Quality Producer	2			

• follows directions
• completes work
• produces a variety of products demonstrating what has been learned

Comments:

Assessment based on the TUSD CORE Curriculum and AZ State Standards using the following instruments:

- [ ] Portfolios
- [X] Performance Assessments
- [X] Classroom Observations
- [X] Chapter and Classroom Tests
- [ ] Student Self-Assessment
- [ ] Evaluation based on Individualized Education Plan
- [ ] Other

For more information see:
http://instech.tusd.k12.az.us/CORETOP.html

Current LAS Score on File:

Support Programs:

(Student's Name) is assigned to

_____
for the next school year.

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