

# ACAP

## Austin Competency Analysis Profile

### Electronics Technician

#### Conducted

September 21 and 22, 1999

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## **ACAP Process Overview**

### ***What are Austin Competency Analysis Profiles (ACAPs)?***

Austin Competency Analysis Profiles (ACAPs) are competency lists that are verified by expert workers called Subject Matter Experts or SMEs, that evolve from a well-established job analysis process involving business, industry, labor, and community agency representatives from throughout the Austin area.

### ***How is an Austin Competency Analysis Profile used?***

Each ACAP identifies the occupational, academic, and employability skills (or competencies) needed to enter a given occupation or occupational area. The ACAP not only lists the competencies but also clusters those competencies into broader units and details the knowledge, skills, and attitudes (competency builders) needed to perform each competency.

Within the competency list are two levels of items: core and advancing. Core items, which are essential for entry-level employment, are required to be taught. Advancing items are those needed to advance in a given occupation, and are designated by a superscripted "a". If core competencies or competency builders are present in "advancing" unit, then they are designated with a superscripted "c".

Educational institutions may add as many units, competencies, and/or competency builders as desired to reflect local employment needs, trends, and specialties. Local advisory committees are actively involved in the identification and verification of additional items. Faculty members formulate their courses of study using the varied contents of the ACAP. Faculty also monitor gains using many forms of assessment.

# **Electronics Technician ACAP Session Agenda**

**September 21 and 22, 1999**

## **Tuesday, September 21**

**Welcome and Introductions**

**Identify Job Titles for Target Occupation**

**Brainstorm:** *What do people need to know and be able to do as an entry-ready employee in this occupation?*

**Process Overview:**

**Purpose~Why are we here?**

**Review definitions**

**Identify outcomes**

**Verify Units**

**~Lunch Break~**

**Verify Competencies**

**Verify Competency Builders**

## **Wednesday, September 22**

**Continue Verifying Competency Builders**

**Determine Core and Advancing Units, Competencies, and Competency Builders**

**~Lunch Break~**

**Develop Work Keys Occupational Profile**

**Review and Wrap Up**

## **ACAP: Electronics Technician**

### **Target Job Titles**

Network Center Technician

Communications Technician

Customer Testing Technician

Manager of Technical Analysis

Microcomputer Support Technicians – Hardware and Software

Computer Programmers

Card Debug Technicians

Placement Machine Operators

Failure Analysis Technicians

Development Technicians – New Product R&D

Technical Specialist

Systems Specialist

Maintenance Technician

## **ACAP: Electronics Technician**

# **Occupational Competencies**

## UNITS

1. Safety
2. Test Bench Operations
3. DC Circuits
4. AC Circuits
5. Discrete Solid State Devices
6. Analog Circuits
7. Digital Circuits
8. Microprocessors
9. Computer Hardware and Software
10. Technical Communication Skills
11. Fundamentals of Telecommunications (specialty)
12. Computer Networking (specialty)
13. Electro-Mechanical Systems (specialty)



# Electronics Competency List

## Unit 1. Safety

### Competency 1.1 Follow safety procedures

#### *Competency Builders:*

- 1.1.1 Work safely with all types of circuits and components to avoid shock
- 1.1.2 Use hand tools and equipment correctly and safely
- 1.1.3 Apply safety-grounding systems (lightning arresters, ground-fault interrupters, etc.)
- 1.1.4 Wear protective clothing and equipment as required. (safety glasses, etc.)

### Competency 1.2 Demonstrate proper handling of hazardous materials

#### *Competency Builders:*

- 1.2.1 Interpret Material Safety Data Sheet labels
- 1.2.2 Identify location of Material Safety Data Sheet (MSDS) manual
- 1.2.3 Follow established procedures for use and storage of hazardous materials
- 1.2.4 Follow established procedures for disposing of hazardous materials.

### Competency 1.3 Comply with relevant safety standards and regulations.

#### *Competency Builders:*

- 1.3.1 Comply with OSHA standards.
- 1.3.2 Follow other industry/company specific safety regulations

## Unit 2 Test Bench Operations

### Competency 2.1 Perform assembly operations

#### *Competency Builders:*

- 2.1.1 Practice damage-prevention procedures established for electrostatic discharge (ESD)
- 2.1.2 Use proper troubleshooting techniques
- 2.1.3 Use hand and power tools for basic assembly
- 2.1.4 Solder/de-solder using proper equipment and techniques, such as through-hole and surface mount devices
- 2.1.5 Make solderless connections
- 2.1.6 Disassemble, repair, and re-assemble parts on printed circuit boards

## **Competency 2.2                      Interpret/apply information from appropriate resources**

### *Competency Builders:*

- 2.2.1 Specify components using data books and cross reference/technical manuals
- 2.2.2 Requisition electronic components using data books and cross reference/technical manuals
- 2.2.3 Interpret electronic schematics, technical drawings, flow charts and diagrams
- 2.2.4 Create electronic schematics, technical drawings, flow charts and diagrams
- 2.2.5 Record and interpret performance data using curves, tables and graphs
- 2.2.6 Interpret color codes and other component descriptors
- 2.2.7 Interpret site electrical and environmental surveys for support of sensitive electronic devices (e.g. temperature, electromagnetic field, current flow)

## **Competency 2.3                      Analyze electronic systems**

### *Competency Builders:*

- 2.3.1 Analyze technical requirements of electronic devices
- 2.3.2 Assess signs and symptoms of malfunctions
- 2.3.3 Calibrate testing instruments to prescribed specifications.
- 2.3.4 Calibrate installed or repaired equipment to prescribed specifications
- 2.3.5 Determine feasibility of using standardized equipment
- 2.3.6 Develop specifications for equipment required to perform additional functions
- 2.3.7 Establish/follow trouble isolation procedures
- 2.3.8 Test faulty systems using proper test equipment
- 2.3.9 Diagnose malfunction based on normal functional operation of electronic unit and systems
- 2.3.10 Inspect components of equipment for accuracy of assembly, installation and for defects such as loose connections and frayed wire

## **Competency 2.4                      Test circuits using appropriate test equipment**

### *Competency Builders:*

- 2.4.1 Apply proper grounding and isolation techniques
- 2.4.2 Assess voltage breakdown limitations of probes and test equipment.
- 2.4.3 Use isolation transformers in working with non-isolated test equipment.

## **Unit 3                    DC Circuits**

### **Competency 3.1                    Summarize the properties of DC circuits**

*Competency Builders:*

- 3.1.1 Recognize sources of electricity in DC circuits
- 3.1.2 Explain principles and operation of batteries
- 3.1.3 Use correct terminology such as, voltage, current, resistance, and power in DC terms
- 3.1.4 Identify magnetic properties of circuits and devices
- 3.1.5 Recognize physical and electrical characteristics of capacitors and inductors
- 3.1.6 Measure power in DC circuits

### **Competency 3.2                    Determine resistance and conductance of DC circuits**

*Competency Builders:*

- 3.2.1 Measure resistance of conductors and insulators
- 3.2.2 Identify conductors and insulators in circuit
- 3.2.3 Compute conductance
- 3.2.4 Apply Ohms Law to series, parallel and series-parallel circuits

### **Competency 3.3                    Troubleshoot and repair DC series, parallel and bridge circuits**

*Competency Builders:*

- 3.3.1 Distinguish between a series, parallel and bridge circuit
- 3.3.2 Interpret circuit schematic
- 3.3.3 Test system components using appropriate devices
- 3.3.4 Apply principles and operations of the Wheatstone Bridge
- 3.3.5 Apply principles and operations of DC voltage divider circuits (loaded and unloaded)
- 3.3.6 Select appropriate replacement components

## **Unit 4                    AC Circuits**

### **Competency 4.1                    Summarize the properties of AC circuits**

*Competency Builders:*

- 4.1.1 Identify sources of electricity in AC circuits
- 4.1.2 Calculate voltage in an AC circuit
- 4.1.3 Identify the properties of an AC signal

- 4.1.4 Recognize sinusoidal and non-sinusoidal wave forms by principles of operation and characteristics
- 4.1.5 Describe power conditioning (i.e., isolation transformers, surge suppressors, uninterruptable power systems)
- 4.1.6 Apply working knowledge of radio frequency and it's uses

**Competency 4.2                      Troubleshoot and repair AC capacitive and inductive Circuits**

*Competency Builders:*

- 4.2.1 Calculate and measure capacitance of series and parallel capacitors
- 4.2.2 Calculate and measure inductance of series and parallel inductors
- 4.2.3 Calculate and measure RL and RC time constraints
- 4.2.4 Calculate and measure power factor and phase angle
- 4.2.5 Interpret circuit schematic
- 4.2.6 Test circuit components
- 4.2.7 Repair/replace circuit components

**Competency 4.3                      Use transformers in AC circuits**

*Competency Builders:*

- 4.3.1 Build AC circuits using transformers
- 4.3.2 Troubleshoot and repair AC circuits using transformers
- 4.3.3 Determine phase relationships in an AC circuit

**Competency 4.4                      Design AC frequency selective filter circuits**

*Competency Builders:*

- 4.4.1 Calculate and measure resonant and nonresonant characteristics of both series, and parallel RLC circuits.
- 4.4.2 Calculate and measure characteristics of voltage wave forms.
- 4.4.3 Troubleshoot and repair AC differentiator and integrator circuits

**Competency 4.5                      Troubleshoot and repair AC polyphase circuits**

*Competency Builders:*

- 4.5.1 Use AC phase locked loop circuits
- 4.5.2 Troubleshoot AC phase locked loop circuits
- 4.5.3 Repair AC phase locked loop circuits

## **Unit 5                      Discrete Solid State Devices**

### **Competency 5.1                      Summarize the principles of solid state devices**

*Competency Builders:*

- 5.1.1 Describe the properties of semiconductor materials
- 5.1.2 Define PN junctions
- 5.1.3 Explain and test bipolar transistors
- 5.1.4 Identify field effect transistors (FET's,/MOS-FET's)
- 5.1.5 Identify special diodes and transistors

### **Competency 5.2                      Fabricate and troubleshoot circuits using diodes, transistors, SCR's and TRIACs**

*Competency Builders:*

- 5.2.1 Explain the basic structure and theory of solid state devices
- 5.2.2 Interpret circuit schematics
- 5.2.3 Troubleshoot system components.
- 5.2.4 Repair/replace solid state devices

### **Competency 5.3                      Troubleshoot and repair optoelectronic circuits**

*Competency Builders:*

- 5.3.1 Assemble optoelectronic circuits (gate isolators, interrupt sensors, infra red sensors, etc.)
- 5.3.2 Use optoelectronic circuits (gate isolators, interrupt sensors, infra red sensors, etc.)
- 5.3.3 Troubleshoot optoelectronic circuits (gate isolators, interrupt sensors, infra red sensors, etc.)
- 5.3.4 Repair optoelectronic circuits (gate isolators, interrupt sensors, infra red sensors, etc.)

### **Competency 5.4                      Troubleshoot and repair circuits containing single stage Amplifiers**

*Competency Builders:*

- 5.4.1 Assemble single stage amplifiers
- 5.4.2 Use single stage amplifiers
- 5.4.3 Troubleshoot single stage amplifiers
- 5.4.4 Repair single stage amplifiers

**Competency 5.5**                      **Calibrate instrumentation used to monitor conditions and/or properties in solid-state devices and circuits**

*Competency Builders:*

- 5.5.1 Select appropriate measuring instrument
- 5.5.2 Determine the degree of precision required
- 5.5.3 Interpret instrument reading

**Unit 6**                      **Analog Circuits**

**Competency 6.1**                      **Apply the principles and operations of multistage Amplifiers**

*Competency Builders:*

- 6.1.1 Assemble multistage amplifiers
- 6.1.2 Apply use of multistage amplifiers
- 6.1.3 Troubleshoot multistage amplifiers
- 6.1.4 Repair multistage amplifiers

**Competency 6.2**                      **Apply the principles and operations of IF circuits**

*Competency Builders:*

- 6.2.1 Assemble IF circuits
- 6.2.2 Apply use of IF circuits
- 6.2.3 Troubleshoot IF circuits
- 6.2.4 Repair IF circuits

**Competency 6.3**                      **Apply the principles and operations of linear power supplies and filters**

*Competency Builders:*

- 6.3.1 Assemble linear power supplies and filters
- 6.3.2 Apply use of linear power supplies and filters
- 6.3.3 Troubleshoot linear power supplies and filters
- 6.3.4 Repair linear power supplies and filters

**Competency 6.4                      Apply the principles and operations of operational amplifier circuits**

*Competency Builders:*

- 6.4.1 Assemble operational amplifier circuits
- 6.4.2 Apply use of operational amplifier circuits
- 6.4.3 Troubleshoot operational amplifier circuits
- 6.4.4 Repair operational amplifier circuits

**Competency 6.5                      Apply the principles and operations of audio power Amplifiers**

*Competency Builders:*

- 6.5.1 Assemble audio power amplifiers
- 6.5.2 Apply use of audio power amplifiers
- 6.5.3 Troubleshoot audio power amplifiers
- 6.5.4 Repair audio power amplifiers

**Competency 6.6                      Apply the principles and operations of regulated and switching power supply circuits**

*Competency Builders:*

- 6.6.1 Explain principles and operations of regulated and switching power supply circuits
- 6.6.2 Troubleshoot regulated and switching power supply circuits
- 6.6.3 Repair regulated and switching power supply circuits

**Competency 6.7                      Apply the principles and operations of sinusoidal and non-sinusoidal oscillator circuits**

*Competency Builders:*

- 6.7.1 Explain principles and operations of sinusoidal and non-sinusoidal oscillator circuits
- 6.7.2 Troubleshoot sinusoidal and non-sinusoidal oscillator circuits
- 6.7.3 Repair sinusoidal and non-sinusoidal oscillator circuits

**Competency 6.8                      Apply the principles and operations of RF circuits**

*Competency Builders:*

- 6.8.1 Assemble RF circuits

- 6.8.2 Use RF circuits
- 6.8.3 Troubleshoot RF circuits
- 6.8.4 Repair RF circuits

**Competency 6.9**                      **Apply the principles and operations of signal modulation systems (AM, FM, Stereo)**

*Competency Builders:*

- 6.9.1 Explain the principles and operations of signal modulation systems (AM, FM, Stereo)
- 6.9.2 Troubleshoot signal modulation systems (AM, FM, Stereo)
- 6.9.3 Repair signal modulation systems (AM, FM, Stereo)

**Competency 6.10**                      **Apply working knowledge of other analog circuits**

*Competency Builders:*

- 6.10.1 Use motor phase shift control circuits
- 6.10.2 Manipulate synchros, resolvers, and stepper motors
- 6.10.3 Apply working knowledge of principles and operations of microwave circuits

**Unit 7**                      **Digital circuits**

**Competency 7.1**                      **Compare integrated circuit (IC) logic families**

*Competency Builders:*

- 7.1.1 Explain the characteristics of IC logic families
- 7.1.2 Minimize logic circuits using Boolean algebra operations
- 7.1.3 Apply Karnaugh mapping to express logic operations and minimize logic circuits in design
- 7.1.4 Make conversions between digital numbering systems

**Competency 7.2**                      **Troubleshoot and repair linear Integrated and combinational logic circuits**

*Competency Builders:*

- 7.2.1 Identify principles and operations of types of logic gates
- 7.2.2 Create a truth table for standard digital logic gates
- 7.2.3 Construct combinational logic circuits
- 7.2.4 Locate external and internal digital IC faults



**Competency 7.3**                      **Incorporate flip-flops and related devices into digital Circuits**

*Competency Builders:*

- 7.3.1 Describe the function of flip-flops, registers, and counters in digital circuits
- 7.3.2 Explain the operations of clock and timing circuits
- 7.3.3 Perform flip-flop synchronization
- 7.3.4 Design clock generator circuits
- 7.3.5 Design circuits that include frequency counters, digital clock counters, IC registers, parallel in/parallel out, serial in/serial out, parallel in/serial out, serial in/parallel out

**Competency 7.4**                      **Troubleshoot and repair arithmetic-logic circuits**

*Competency Builders:*

- 7.4.1 Identify arithmetic-logic circuits principles and operations
- 7.4.2 Design a full adder, complete parallel adder with registers, IC parallel adder, and BCD adder

**Competency 7.5**                      **Troubleshoot and repair MSI Logic circuits**

*Competency Builders:*

- 7.5.1 Identify principles and operations of types of multiplexer and demultiplexer circuits
- 7.5.2 Describe the function of encoders, decoders, and digital signal processors in a MSI logic circuit

**Competency 7.6**                      **Troubleshoot analog and analog to digital circuits**

*Competency Builders:*

- 7.6.1 Apply operations of types of digital to analog and analog to digital circuits
- 7.6.2 Troubleshoot digital to analog and analog to digital circuits
- 7.6.3 Repair digital to analog and analog to digital circuits
- 7.6.4 Evaluate digital systems while operating in correct and fault mode using various test instruments

**Competency 7.7**                      **Troubleshoot digital display circuits**

*Competency Builders:*

- 7.7.1 Identify principles and operations of types of digital display circuits

- 7.7.2 Troubleshoot types of digital display circuits
- 7.7.3 Repair types of digital display circuits

**Competency 7.8                      Solve power distribution noise problems**

*Competency Builders:*

- 7.8.1 Identify principles and operations of power distribution noise problems
- 7.8.2 Troubleshoot power distribution noise problems
- 7.8.3 Repair power distribution noise problems

**Unit 8                                  Microprocessors**

**Competency 8.1                      Identify essential microprocessor components**

*Competency Builders:*

- 8.1.1 Use microprocessor BUS concepts
- 8.1.2 Use microprocessor components and terminology
- 8.1.3 Identify types of microprocessor memory circuits
- 8.1.4 Identify microprocessor peripheral interface adapters PIA

**Competency 8.2                      Troubleshoot microprocessor interfaces (i.e. PIA)**

*Competency Builders:*

- 8.2.1 Identify faulty microprocessor interfaces (i.e. PIA)
- 8.2.2 Analyze microprocessor circuitry
- 8.2.3 Replace microprocessor

**Competency 8.3                      Use programming devices to program, monitor, and edit the instructions in programmable controllers**

*Competency Builders:*

- 8.3.1 Construct a relay ladder diagram
- 8.3.2 Describe the function and operation of the three basic components of programmable controllers
- 8.3.3 Revise electrical ladder control diagrams as reference diagrams to be programmed into the user memory of the programmable controller

**Competency 8.4                      Design programs for the programmable controller.**

*Competency Builders:*

- 8.4.1 Use standard and special functions
- 8.4.2 Determine the program requirements

**Competency 8.5                      Troubleshoot operation of programmable controller**

*Competency Builders:*

- 8.5.1 Use reference diagram, indicator lights, and programming devices

**Unit 9                                      Computer Hardware and Software**

**Competency 9.1                      Summarize the history of computers**

*Competency Builders:*

- 9.1.1 Explain the evolution of computers from the flip flop to the microprocessor
- 9.1.2 Trace the origins of computer logic

**Competency 9.2                      Identify hardware components of a microcomputer**

*Competency Builders:*

- 9.2.1 Draw a simple block diagram of a digital computer system
- 9.2.2 Identify the input and output devices, peripherals, and storage devices
- 9.2.3 Identify motherboards, BUS architectures and CMOS
- 9.2.4 Identify CPU types and components
- 9.2.5 Identify memory types (i.e. RAM, CACHE, ROM)

**Competency 9.3                      Assemble and disassemble a microcomputer**

*Competency Builders:*

- 9.3.1 Configure BIOS (CMOS setup)
- 9.3.2 Identify hardware components for use/compatibility
- 9.3.3 Configure hardware components
- 9.3.4 Assemble hardware components
- 9.3.5 Troubleshoot and repair hardware components

## **Competency 9.4                      Select and install an operating system**

*Competency Builders:*

- 9.4.1 Compare and evaluate operating systems including DOS, OS2, UNIX, Windows, MAC OSs, etc.
- 9.4.2 Select appropriate operating system
- 9.4.3 Install selected operating system
- 9.4.4 Configure operating system, device drivers, peripherals and environment settings
- 9.4.5 Troubleshoot operating system configuration
- 9.4.6 Repair/reinstall operating system

## **Unit 10                      Technical Communication Skills**

### **Competency 10.1                      Compose technical reports and documentation**

*Competency Builders:*

- 10.1.1 Write corrective action reports
- 10.1.2 Write equipment justifications
- 10.1.3 Write procedural documentation
- 10.1.4 Use computer based applications (word, excel, powerpoint, etc.)

### **Competency 10.2                      Give an oral presentation**

*Competency Builders:*

- 10.2.1 Apply oral communication skills
- 10.2.2 Use visual media to support an oral presentation such as presentation software (Powerpoint)

### **Competency 10.3                      Locate and interpret technical materials, references**

*Competency Builders:*

- 10.3.1 Access resources via library, internet, equipment manuals, data manuals, etc.
- 10.3.2 Use relevant information to perform work functions and solve problems such as troubleshooting and configuration sections, flowcharts, schematics, specifications, etc.

## **Unit 11                      Telecommunications (specialization)**

### **Competency 11.1                      Use electronic communication systems**

*Competency Builders:*

- 11.1.1 Use applications of transmission line
- 11.1.2 Recognize antenna propagation systems (i.e. microwave, broadcast, telemetry, etc.)
- 11.1.3 Identify types of multiplexing system
- 11.1.4 Use data communications
- 11.1.5 Identify types of telephone switching systems
- 11.1.6 Identify different types of communication mediums (i.e. copper, fiber optic, radio frequency)

### **Competency 11.2                      Apply the principles and operations of fiber optic circuits using photodiodes or LASERS**

*Competency Builders:*

- 11.2.1 Explain principles and operations of fiber optic circuits using photodiodes or LASERS
- 11.2.2 Troubleshoot fiber optic circuits using photodiodes or LASERS
- 11.2.3 Repair fiber optic circuits using photodiodes or LASERS

### **Competency 11.3                      Perform laser applications**

*Competency Builders:*

- 11.3.1 Weld, cut and drill
- 11.3.2 Record and manipulate data
- 11.3.3 Test and monitor environment
- 11.3.4 Perform nondestructive testing

## **Unit 12                      Computer Networking (specialization)**

### **Competency 12.1                      Use common operating systems**

*Competency Builders:*

- 12.1.1 Establish a network topology (LAN, WAN) and protocol including OSI model
- 12.1.2 Draw a simple block diagram of a digital computer network system
- 12.1.3 Identify essential microcomputer components
- 12.1.4 Set up a computer using available operating systems and software packages
- 12.1.5 Configure a computer using available operating systems and software packages

## **Competency 12.2                    Set up and maintain computer networks**

*Competency Builders:*

- 12.2.1 Select appropriate computer network interfaces
- 12.2.2 Load network software
- 12.2.3 Configure network computers
- 12.2.4 Troubleshoot network problems

## **12.3    Troubleshoot interfaces with network peripherals**

*Competency Builders:*

- 12.3.1 Perform network peripheral configuration
- 12.3.2 Troubleshoot network peripherals
- 12.3.3 Replace network peripherals

## **Unit 13                    Electro-mechanical Systems (specialization)**

### **Competency 13.1                    Troubleshoot hydraulic and pneumatic systems**

*Competency Builders:*

- 13.1.1 Identify hydraulic and pneumatic system components
- 13.1.2 Compare hydraulic and pneumatic systems
- 13.1.3 Interpret schematics of hydraulic and pneumatic systems
- 13.1.4 Test system components
- 13.1.5 Recognize the unique properties of liquids and gasses

### **Competency 13.2                    Integrate hydraulic and pneumatic devices into electronic and computer system interfaces**

*Competency Builders:*

- 13.2.1 Troubleshoot interface of system components
- 13.2.2 Adjust system controls
- 13.2.3 Read pressure gages, manifolds, and flow measuring instruments

### **Competency 13.3                    Perform preventive maintenance on systems**

*Competency Builders:*

- 13.3.1 Monitor system performance
- 13.3.2 Maintain maintenance log

13.3.3 Perform periodic service and repair

**Competency 13.4                      Troubleshoot motor control and computer system  
Interfaces**

*Competency Builders:*

- 13.4.1 Identify servomechanisms, motors, and motor control circuits including power distribution systems, relays and relay circuits, protection circuits, types of motor controllers, types of motors
- 13.4.2 Identify parts of a mechanical power transmission system including measuring instruments, compound and reverted gear trains, internal and planetary gear trains, helical and bevel gear trains, rack and pinion mechanisms, worm and wheel mechanisms, block and screw mechanisms, and counter rotating mechanisms and differentials, etc.

**ACAP: Electronics Technician~~**

## **Employability Competencies**



## UNITS

- Unit 1: Career Development**
- Unit 2: Decision Making and Problem Solving**
- Unit 3: Work Ethic**
- Unit 4: Job-Seeking Skills**
- Unit 5: Job Retention and Career Advancement Skills**
- Unit 6: Technology in the Workplace**
- Unit 7: Lifelong Learning**
- Unit 8: Economic Education**
- Unit 9: Balancing Work and Family**
- Unit 10: Citizenship in the Workplace**
- Unit 11: Leadership**
- Unit 12: Entrepreneurship**

## **Unit 1: Career Development**

### **Competency 1.1: Investigate career options**

#### *Competency Builders:*

- 1.1.1 Determine interests and aptitudes
- 1.1.2 Identify career options
- 1.1.3 Research interests, knowledge, abilities, and skills needed in an occupation
- 1.1.4 Select careers that best match interests and aptitudes
- 1.1.5 Identify advantages and disadvantages of career options, including self-employment and nontraditional careers

### **Competency 1.2: Utilize career information**

#### *Competency Builders:*

- 1.2.1 Identify a range of career information resources
- 1.2.2 Use a range of resources to obtain career information (e.g., handbooks, career materials, labor market information, and computerized career-information delivery systems)
- 1.2.3 Demonstrate knowledge of various classification systems that categorize occupations and industries (e.g., *Dictionary of Occupational Titles*)
- 1.2.4 Describe the educational requirements of various occupations
- 1.2.5 Identify individuals in selected occupations as possible information resources, role models, or mentors
- 1.2.6 Describe the impact of factors such as population, climate, employment trends, and geographic location on occupational opportunities
- 1.2.7 Assess differences in the wages, benefits, annual incomes, cost of living, and job opportunities associated with selected career options
- 1.2.8 Determine labor market projections for selected career options

### **Competency 1.3: Participate in a career exploration activity**

#### *Competency Builders:*

- 1.3.1 Identify career exploration activities (e.g., job shadowing, mentoring, volunteer experiences, part-time employment, and cooperative education)
- 1.3.2 Compare traits, skills, and characteristics required for specific career choices with individual's traits, skills, and characteristics
- 1.3.3 Recognize potential conflicts between personal characteristics and career choice areas
- 1.3.4 Describe the impact of exploration activities on current choices

**Competency 1.4: Assess the relationship between educational achievement and career planning**

*Competency Builders:*

- 1.4.1 Describe how skills developed in academic and vocational programs relate to career goals
- 1.4.2 Describe how education relates to the selection of a college major, further training, and/or entry into the job market
- 1.4.3 Identify skills that can apply to a variety of occupational requirements
- 1.4.4 Explain the importance of possessing learning skills in the workplace

**Competency 1.5: Develop an individual career plan**

*Competency Builders:*

- 1.5.1 Identify career goal(s)
- 1.5.2 Identify worker conditions, education, training, and employment opportunities related to selected career goal(s)
- 1.5.3 Describe school and community resources available to help achieve career goal(s)
- 1.5.4 Identify career ladders possible within selected career goal(s)\*
- 1.5.5 Identify additional experiences needed to move up identified career ladders\*
- 1.5.6 Recognize that changes may require retraining and upgrading of employees' skills

**Competency 1.6: Annually review/revise the individual career plan**

*Competency Builders:*

- 1.6.1 Identify experiences that have reinforced selection of the specific career goal(s) listed on the individual career plan
- 1.6.2.1 Identify experiences that have changed the specific career goals(s) listed on the individual career plan
- 1.6.3 Modify the career goal(s) and educational plans on the individual career plan
- 1.6.4 Ensure that parents or guardians provide input into the individual career plan process
- 1.6.5 Identify the correlation between the individual career plan and the actual courses to be taken in high school
- 1.6.6 Identify the correlation between the individual career plan and postsecondary training, adult education, or employment

## **Unit 2: Decision Making and Problem Solving**

### **Competency 2.1: Apply decision-making techniques in the workplace**

#### *Competency Builders:*

- 2.1.1 Identify the decision to be made
- 2.1.2 Compare alternatives
- 2.1.3 Determine the consequences of each alternative
- 2.1.4 Make decisions based on values and goals
- 2.1.5 Evaluate the decision made

### **Competency 2.2: Apply problem-solving techniques in the workplace**

#### *Competency Builders:*

- 2.2.1 Diagnose the problem, its urgency, and its causes
- 2.2.2 Identify alternatives and their consequences in relation to the problem
- 2.2.3 Recognize multicultural and nonsexist dimensions of problem solving
- 2.2.4 Explore possible solutions to the problem using a variety of resources
- 2.2.5 Compare/contrast the advantages and disadvantages of each solution
- 2.2.6 Determine appropriate action
- 2.2.7 Implement action
- 2.2.8 Evaluate results of action implemented

## **Unit 3: Work Ethic**

### **Competency 3.1: Evaluate the relationship of self-esteem to work ethic**

#### *Competency Builders:*

- 3.1.1 Identify special characteristics and abilities in self and others
- 3.1.2 Identify internal and external factors that affect self-esteem
- 3.1.3 Identify how individual characteristics relate to achieving personal, social, educational, and career goals
- 3.1.4 Identify the relationship between personal behavior and self-concept

### **Competency 3.2: Analyze the relationship of personal values and goals to work ethic both in and out of the workplace**

#### *Competency Builders:*

- 3.2.1 Distinguish between values and goals
- 3.2.2 Determine the importance of values and goals
- 3.2.3 Evaluate how one's values affect one's goals
- 3.2.4 Identify own short- and long-term goals
- 3.2.5 Prioritize own short- and long-term goals
- 3.2.6 Identify how one's values are reflected in one's work ethic
- 3.2.7 Identify how interactions in the workplace affect one's work ethic
- 3.2.8 Identify how life changes affect one's work ethic

**Competency 3.3: Demonstrate work ethic**

*Competency Builders:*

- 3.3.1 Examine factors that influence work ethic
- 3.3.2 Display initiative
- 3.3.3 Demonstrate dependable attendance and punctuality
- 3.3.4 Demonstrate organizational skills
- 3.3.5 Adhere to schedules and deadlines
- 3.3.6 Demonstrate a willingness to learn
- 3.3.7 Demonstrate a willingness to accept feedback and evaluation
- 3.3.8 Demonstrate interpersonal skills required for working with and for others
- 3.3.9 Describe appropriate employer-employee interactions for various situations
- 3.3.10 Express feelings and ideas in an appropriate manner for the workplace

**Competency 3.4: Demonstrate safety skills**

*Competency Builders:*

- 3.4.1 Practice safe work habits
- 3.4.2 Identify safety hazards
- 3.4.3 Employ preventative safety measures
- 3.4.4 Demonstrate appropriate care and use of equipment and facilities to ensure safety
- 3.4.5 Comply with safety and emergency procedures

**Unit 4: Job-Seeking Skills**

**Competency 4.1: Prepare for employment**

*Competency Builders:*

- 4.1.1 Identify traditional and nontraditional employment sources
- 4.1.2 Utilize employment sources

- 4.1.3 Research job opportunities, including nontraditional careers
- 4.1.4 Interpret equal employment opportunity laws
- 4.1.5 Explain the critical importance of personal appearance, hygiene, and demeanor throughout the employment process
- 4.1.6 Prepare for generic employment tests and those specific to an occupation/organization

**Competency 4.2:                    Develop a resume**

*Competency Builders:*

- 4.2.1 Identify personal strengths and weaknesses
- 4.2.2 List skills and/or abilities, career objective(s), accomplishments, educational background, work experience, volunteer/community contributions, and organizational memberships
- 4.2.3 Select an acceptable resume format
- 4.2.4 Use correct grammar and spelling and concise wording
- 4.2.5 Secure references
- 4.2.6 Complete the resume

**Competency 4.3:                    Complete the job application process**

*Competency Builders;*

- 4.3.1 Explain the importance of an application form
- 4.3.2 Obtain job application forms
- 4.3.3 Demonstrate behaviors (e.g., personal appearance, hygiene, and demeanor) for obtaining job application forms in person
- 4.3.4 Describe methods for handling illegal questions on job application forms
- 4.3.5 Demonstrate legible written communication skills using correct grammar and spelling and concise wording
- 4.3.6 Return application to appropriate person
- 4.3.7 Request interview
- 4.3.8 Follow up on application status

**Competency 4.4:                    Demonstrate interviewing skills**

*Competency Builders:*

- 4.4.1 Investigate interview procedures
- 4.4.2 Demonstrate appropriate behaviors (e.g., appearance, hygiene, and demeanor) for the interview
- 4.4.3 Demonstrate question-and-answer techniques

- 4.4.4 Demonstrate methods for handling difficult and/or illegal interview questions
- 4.4.5 Use correct grammar and concise wording

**Competency 4.5:                    Secure employment**

*Competency Builders:*

- 4.5.1 Identify present and future employment opportunities within an occupation/organization
- 4.5.2 Research the organization/company
- 4.5.3 Use follow-up techniques to enhance employment potential
- 4.5.4 Evaluate job offer(s)
- 4.5.5 Respond to job offer(s)

**Unit 5:                                Job Retention and Career Advancement Skills**

**Competency 5.1:                    Analyze the organizational structure of the workplace**

*Competency Builders:*

- 5.1.1 Identify employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
- 5.1.2 Comply with company policies and procedures
- 5.1.3 Examine the role/relationship between employee and employer
- 5.1.4 Recognize opportunities for advancement and reasons for termination
- 5.1.5 Recognize the organization's ethics

**Competency 5.2:                    Maintain positive relations with others**

*Competency Builders:*

- 5.2.1 Exhibit appropriate work habits and attitudes
- 5.2.2 Identify behaviors for establishing successful working relationships
- 5.2.3 Cooperate through teamwork and group participation
- 5.2.4 Demonstrate a willingness to compromise
- 5.2.5 Identify methods for dealing with harassment, bias, and discrimination based on race, color, national origin, gender, religion, disability, or age
- 5.2.6 Cooperate with authority
- 5.2.7 Accept supervision

**Competency 5.3: Demonstrate accepted social and work behaviors**

*Competency Builders:*

- 5.3.1 Demonstrate a positive attitude
- 5.3.2 Demonstrate accepted conversation skills
- 5.3.3 Use good manners
- 5.3.4 Accept responsibility for assigned tasks
- 5.3.5 Demonstrate personal hygiene
- 5.3.6 Demonstrate knowledge of a position
- 5.3.7 Perform quality work

**Competency 5.4: Analyze opportunities for personal and career growth\***

*Competency Builders:*

- 5.4.1 Demonstrate opportunities within chosen occupation/organization\*
- 5.4.2 Determine other career opportunities outside chosen occupation/organization\*
- 5.4.3 Evaluate the factors involved in considering a new position within or outside an occupation/organization\*
- 5.4.4 Exhibit characteristics needed for advancement\*

**Unit 6: Technology in the Workplace**

**Competency 6.1: Demonstrate knowledge of technology issues**

*Competency Builders:*

- 6.1.1 Demonstrate knowledge of the characteristics of technology
- 6.1.2 Demonstrate knowledge of how technology systems are applied
- 6.1.3 Assess the impact of technology on the individual, society, and environment
- 6.1.4 Demonstrate knowledge of the evolution of technology
- 6.1.5 Identify how people, information, tools and machine, energy, capital, physical space, and time influence the selection and use of technology
- 6.1.6 Identify legal and ethical issues related to technology (e.g., confidentiality, information sharing, copyright protection)

**Competency 6.2: Demonstrate skills related to technology issues**

*Competency Builders:*

- 6.2.1 Exhibit willingness to adapt to technological change
- 6.2.2 Utilize technological systems
- 6.2.3 Utilize a variety of resources and processes to solve technological problems



- 6.2.4 Employ higher-order thinking skills for solving technological problems
- 6.2.5 Work as a team member in solving technological problems
- 6.2.6 Use technology in a safe and responsible manner
- 6.2.7 Apply science, mathematics, communication, and social studies concepts to solve technological problems
- 6.2.8 Demonstrate ingenuity and creativity in the use of technology\*
- 6.2.9 Utilize a formal method (systems approach) in solving technological problems\*

## **Unit 7: Lifelong Learning**

### **Competency 7.1: Apply lifelong learning practices to individual situations**

#### *Competency Builders:*

- 7.1.1 Define lifelong learning
- 7.1.2 Identify factors that cause the need for lifelong learning
- 7.1.3 Identify changes that may require the retraining and upgrading of employee's skills
- 7.1.4 Identify avenues for lifelong learning
- 7.1.5 Participate in lifelong learning activities

### **Competency 7.2: Adapt to change**

#### *Competency Builders:*

- 7.2.1 Analyze the causes and effect of change
- 7.2.2 Identify the effect of change on goals
- 7.2.3 Identify the importance of flexibility when reevaluating goals
- 7.2.4 Evaluate the need for lifelong learning experiences in adapting to change

## **Unit 8: Economic Education**

### **Competency 8.1: Analyze how an economy functions as a whole**

#### *Competency Builders:*

- 8.1.1 Describe how individuals and societies make choices to satisfy needs and wants with limited resources
- 8.1.2 Identify how production factors (land, labor, capital, and entrepreneurship) are used to produce goods and services
- 8.1.3 Illustrate how individuals and households exchange their resources for the income they use to buy goods and services
- 8.1.4 Explain how individuals and business firms use resources to produce goods and services to generate income

- 8.1.5 Identify characteristics of command, market, and traditional economics\*
- 8.1.6 Describe how all levels of government assess taxes in order to provide services

**Competency 8.2: Analyze how an economic system is a framework within which decisions are made by individuals and groups**

*Competency Builders:*

- 8.2.1 List several individuals and groups that make economic decisions at the local, state, and national levels
- 8.2.2 Identify the important roles that local, state, and national governments play in a market economy
- 8.2.3 List examples of how government decisions affect individuals
- 8.2.4 Identify how geographic locations affect the political and economic systems of the world
- 8.2.5 Evaluate how markets allocate goods and services
- 8.2.6 Explain how resources, goods, and services are exchanged in markets
- 8.2.7 Explain competition and its effect on the market

**Competency 8.3: Analyze the importance of making informed personal financial decisions**

*Competency Builders:*

- 8.3.1 Describe the need for personal management records
- 8.3.2 Create a personal budget
- 8.3.3 Create a budget for a family of four for one month
- 8.3.4 Explain how credit affects personal/family finances
- 8.3.5 Identify steps to avoid credit problems
- 8.3.6 Make informed consumer choices in response to personal needs and wants
- 8.3.7 Identify factors that influence consumer decisions (e.g., advertisements, peer groups, price, and location)
- 8.3.8 Explain the cost and benefits for individuals of various types of taxation at the local, state, and federal levels

**Unit 9: Balancing Work and Family**

**Competency 9.1: Analyze the effects of family on work**

*Competency Builders:*

- 9.1.1 Recognize how family values, goals, and priorities are reflected in the workplace
- 9.1.2 Identify present and future family structures and responsibilities

- 9.1.3 Describe personal and family roles
- 9.1.4 Analyze concerns of working parent(s)
- 9.1.5 Examine how family responsibilities can conflict with work
- 9.1.6 Identify ways to resolve family-related conflicts
- 9.1.7 Explain how to use support systems/community resources to help resolve family-related conflicts

**Competency 9.2: Analyze the effects of work on family**

*Competency Builders:*

- 9.2.1 Identify responsibilities associated with paid and nonpaid work
- 9.2.2 Compare the advantages and disadvantages of multiple incomes
- 9.2.3 Explain how work can conflict with family responsibilities
- 9.2.4 Explain how work-related stress can affect families
- 9.2.5 Identify family support systems and resources

**Unit 10: Citizenship in the Workplace**

**Competency 10.1: Exercise the rights and responsibilities of citizenship in the workplace**

*Competency Builders:*

- 10.1.1 Identify the basic rights and responsibilities of citizenship in the workplace
- 10.1.2 Identify situations in which compromise is necessary
- 10.1.3 Examine how individuals from various backgrounds contribute to the workplace
- 10.1.4 Demonstrate initiative to facilitate cooperation
- 10.1.5 Give/receive constructive criticism to enhance cooperation

**Competency 10.2 Prepare to work in a multicultural society**

*Competency Builders:*

- 10.2.1 Identify ways to live in a multicultural society with mutual respect and appreciation for others
- 10.2.2 Examine how culture and experience create differences in people
- 10.2.3 Demonstrate respect for the contributions made by all people
- 10.2.4 Investigate personal cultural background as a means of developing self-respect
- 10.2.5 Make personal choices that reduce discrimination, isolation, and prejudice
- 10.2.6 Work effectively with people irrespective of their race, gender, religion, ethnicity, disability, age, or cultural background

## **Unit 11: Leadership**

### **Competency 11.1: Evaluate leadership styles appropriate for the workplace**

#### *Competency Builders:*

- 11.1.1 Identify characteristics of effective leaders
- 11.1.2 Compare leadership styles
- 11.1.3 Demonstrate effective delegation skills
- 11.1.4 Investigate empowerment concepts
- 11.1.5 Identify opportunities to lead in the workplace

### **Competency 11.2 Demonstrate effective teamwork skills**

#### *Competency Builders:*

- 11.2.1 Identify the characteristics of a valuable team member
- 11.2.2 Identify methods of involving each team member
- 11.2.3 Contribute to team efficiency and success
- 11.2.4 Determine ways to motivate team members

### **Competency 11.3: Utilize effective communication skills**

#### *Competency Builders:*

- 11.3.1 Identify the importance of listening
- 11.3.2 Demonstrate effective listening skills
- 11.3.3 Demonstrate assertive communication techniques
- 11.3.4 Recognize the importance of verbal and nonverbal cues and messages
- 11.3.5 Prepare written material
- 11.3.6 Analyze written material
- 11.3.7 Give-receive feedback
- 11.3.8 Communicate thoughts
- 11.3.9 Use appropriate language
- 11.3.10 Follow oral and written instructions
- 11.3.11 Demonstrate effective telephone techniques
- 11.3.12 Identify technology in communications

## **Unit 12: Entrepreneurship**

### **Competency 12.1: Evaluate the role of small business**

#### *Competency Builders:*

- 12.1.1 Identify the impact of small business on local economy
- 12.1.2 Examine the relationship of small business to a national (USA) and global economy
- 12.1.3 Identify factors that contribute to the success of small business
- 12.1.4 Identify factors that contribute to the failure of small business
- 12.1.5 Identify the components of a business plan

### **Competency 12.2: Examine entrepreneurship as a personal career option**

#### *Competency Builders:*

- 12.2.1 Evaluate personal interests and skills
- 12.2.2 Compare personal interests and skills with those necessary for entrepreneurship
- 12.2.3 Determine motives for becoming an entrepreneur
- 12.2.4 Identify the advantages and disadvantages of owning a small business
- 12.2.5 Compare business ownership to working for others

## ACT Work Keys Skill Levels

<u>Skill Area</u>	<u>Entry Level</u>	<u>Performance Level</u>
1. Applied Mathematics	6	7
2. Locating Information	6	6
3. Reading for Information	6	6
4. Teamwork	5	5

## **Levels of WorkKeys Defined**

The skills needed to achieve each level for each of the seven WorkKeys\* academic skills are as follows.

### **Applied Mathematics**

*Applied Mathematics* measures skill in applying mathematical reasoning to work-related problems. There are five levels of complexity, 3 through 7, with Level 3 being the least complex and Level 7 the most complex. The levels build on each other, each incorporating the skills at the preceding levels.

#### **Level 3**

\*Perform basic mathematical operations (addition, subtraction, multiplication, and division) and conversions from one form to another, using whole numbers, fractions, decimals, or percentages.

\*Translate simple verbal problems into mathematical equations.

\*Directly apply logical information provided to solve problems, including those with measurements and dollars and cents.

#### **Level 4**

\*Perform one or two mathematical operations (such as addition, subtraction, or multiplication) on several positive or negative numbers. (Division of negative numbers is not covered until Level 5.)

\*Add commonly known fractions, decimals, or percentages (e.g.,  $\frac{1}{2}$ , .75, 25%) or add three fractions that share a common denominator.

\*Calculate averages, simple ratios, proportions, and rates, using whole numbers and decimals.

- \*Reorder verbal information before performing calculations.
- \*Read simple charts or graphs to obtain information needed to solve a problem.

### **Level 5**

- \*Look up and calculate single-step conversions within English or non-English measurement systems (e.g., converting ounces to pounds or centimeters to meters) or between measurement systems (e.g., converting centimeters to inches).
- \*Make calculations using mixed unit (e.g., hours and minutes).
- \*Determine what information, calculations, and unit conversions are needed to find a solution.

### **Level 6**

- \*Set up problems and do several steps of calculations or conversions.
- \*Calculate using negative numbers, fractions, ratios, percentages, or mixed numbers (e.g.,  $12 \frac{1}{8}$ ).
- \*Transpose a formula before calculating (e.g.,  $8X = 20 \Rightarrow X = 20/8$ ).
- \*Look up and use two formulas to change from one unit to another unit within the same system of measurement (e.g., 1 cup = 8 fl oz, 1 quart = 4 cups).
- \*Find mistakes in calculations, such as those required in lower levels.
- \*Determine the best deal and perform a further calculation with the result.

### **Level 7**

- \*Solve problems requiring multiple steps of logic and calculation.
- \*Solve problems involving more than one unknown, nonlinear functions (e.g., rate of change), and applications of basic statistical concepts (e.g., error of measurement).
- \*Locate errors in multiple-step calculations.
- \*Solve problems with unusual content or format, or with incomplete or implicit information



## **Locating Information**

*Locating Information* measures skill in using information taken from workplace graphics such as diagrams, blueprints, floor plans, tables, forms, graphs, charts, and instrument gauges. There are four levels of complexity, 3 through 6, with Level 3 being the least complex and Level 6 the most complex. The levels build on each other, each incorporating the skills at the preceding levels.

### **Level 3**

\*Find one or two pieces of information in elementary workplace graphics, such as simple order forms, bar graphs, tables, flowcharts, and floor plans.

\*Fill in one or two pieces of information that are missing from elementary workplace graphics.

### **Level 4**

\*Find several pieces of information in these type of graphics.

\*Summarize and/or compare information and trends in a single graphic.

\*Summarize and/or compare information and trends among more than one workplace graphic, such as a bar chart and a table showing related information.

### **Level 5**

\*Summarize and/or compare information and trends in single graphic.

\*Summarize and/or compare information and trends among more than one graphic, such as a bar chart and a table showing related information.

### **Level 6**

\*Make decisions, draw conclusions, and/or apply information to new situations using several related and complex workplace graphics that contain a great amount of information or have challenging presentations (e.g., very detailed graphs, charts, tables, forms, maps, blueprints, diagrams).

## **Reading for Information**

*Reading for Information* measures skill in reading and understanding work-related reading materials. There are five levels of complexity, 3 through 7, with Level 3 being the least complex and Level 7 the most complex. Although Level 3 is the least complex, it still represents a level of reading skill well above “no skill at all.” The levels build on each other, each incorporating the skills at the preceding levels.

### **Level 3**

- \*Identify uncomplicated key concepts and simple details.
- \*Recognize the proper placement of a step in a sequence of events, or the proper time to perform a task.
- \*Identify the meaning of words that are defined within a passage.
- \*Identify the meaning of simple words that are not defined within a passage.
- \*Recognize the application of instructions, from a passage to situations that are described in the passage.

### **Level 4**

- \*Identify details that are more subtle than those in Level 3.
- \*Recognize the application of more complex instructions, some of which involve several steps, to described situations.
- \*Recognize cause-effect relationships.

## **Level 5**

- \*Understand the paraphrased definition of specialized words or phrases (jargon or technical terms) defined in these reading materials
- \*Use jargon or technical terms appropriately in describing situations stated in these reading materials
- \*Understand the meaning of acronyms defined in these reading materials (an acronym is a work or collection of letters which stands for a longer phrase, such as HMO to mean Health Maintenance Organization).
- \*Figure out which definition of a word with multiple meanings is appropriate in the context of these reading materials.
- \*Apply information given in these reading materials to situations that are not directly described, but similar.
- \*Apply instructions or procedures with a number of steps to described situations. These instructions may include conditional (if X happens, then you should do Y).

## **Level 6**

- \*Recognize the application of jargon or technical terms to new situations.
- \*Recognize the application of complex instructions to new situations.
- \*Recognize the less-common meaning of a word with multiple meanings from context.
- \*Generalize from a passage to situations not described in the passage.
- \*Identify implied details.
- \*Explain the rationale behind a procedure, policy, or communication.
- \*Generalize from a passage to a somewhat similar situation.

## **Level 7**

\*Recognize the definitions of difficult, uncommon jargon or technical terms from context.

\*Generalize from a passage to situations neither described in nor completely similar to those in a passage.

## **Teamwork**

*Teamwork* measures skill in choosing behaviors and/or actions that simultaneously support team interrelationships and lead toward the accomplishment of work tasks. There are four levels of complexity, 3 through 6, with Level 3 being the least complex and Level 6 the most complex. Although Level 3 is the least complex, it still represents a level of teamwork skill well above “no skill at all.” The levels build on each other, each incorporating the skills at the preceding levels.

## **Level 3**

\*Identify team goals and ways to work with other team members to accomplish those goals.

\*Choose actions that support the ideas of other team members to accomplish team goals.

\*Recognize that a team is having problems finishing a task and identify the cause of those problems.

## **Level 4**

\*Identify the organization of tasks and the time schedule that would help accomplish team goals efficiently and effectively.

\*Select approaches that accept direction from other team members in order to accomplish tasks and to build and keep up good team relations.

\*Identify behaviors that show appreciation for the personal and professional qualities of other team members and respect for their diversity.

### **Level 5**

\*Identify courses of action that give direction to other team members effectively.

\*Choose approaches that encourage and support the efforts of other team members to further team relationships and/or task accomplishment.

\*Consider the possible effects of alternative behaviors on both team relationships and team accomplishments and select the one that would best help the team meet its goals.

### **Level 6**

\*Identify the focus of team activity and select a new focus if that would help the team meet its goals more effectively.

\*Select approaches that show the willingness to give and take direction as needed to further team goals (e.g., recognize the organization of team members' tasks that would best serve the larger goals of the team).

\*Choose approaches that encourage a team to act as a unit and reach agreement when discussing specific issues.

\*Identify actions that would help manage differences of opinion among team members, moving the team toward its goals while valuing and supporting individual diversity.

## **WorkKeys Process Overview**

Developed by American College Testing (ACT), the purpose of the Job Profiling process is to identify the level of applied academic skills that, according to business and industry, students must master to qualify for and be successful in their occupation of choice. The results of Job Profile “leveling” can help teachers to better target instruction toward their students’ needs.

The WorkKeys assessment component, developed by ACT, measures students’ applied academic skills in Applied Mathematics, Reading for Information, Locating Information, Listening, Writing, Teamwork, and Observation. Each Work Keys assessment is further broken down into four to five levels of achievement, with higher numbers indicating higher achievement in the assessed skill. For each academic skill, the Job Profiling process identifies the level required for successful entry into an occupational area.

## **Acknowledgements**

Austin Community College's Workforce Education Office of Curriculum and Competency-Based Instruction wish to extend our sincere thanks to our business, industry, labor, and community partners who donated their time and expertise toward the identification and validation of competencies in the electronics industry.