These cluster matrices provide duties and tasks that form the basis of instructional content for secondary, postsecondary, and adult occupational training programs for industrial occupations. Duties and skills are presented for the following: (1) electric home appliance and power tool repairers; (2) office machine/cash register repairer; (3) correction officers and jailers; (4) commercial artists; (5) photographers; and (6) telephone and cable television line installers/repairers. Each set of duties and skills begins with employability skills. (YLB)
1988
TASK LISTS
FOR
INDUSTRIAL OCCUPATIONS
Illinois Competency Based Vocational Education Project
Housed At: Lake County Area Vocational Center
19525 West Washington Street
Grayslake, IL 60030-1194
(312) 223-6681 or 620-8770

Task Lists Developed by CBVE
Industrial Occupations Consultant

CBVE Project Director

Dave Dimmlich

Urban T. Oen, Ph.D.
INDUSTRIAL OCCUPATIONS

Electric Home Appliance and Power Tool Repairer
*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.
NOTE:

The duties and tasks found in these task lists form the basis of instructional content for secondary, postsecondary and adult occupational training programs. Orientation level instruction, usually offered in grades 9, 10, and 11, is a vital component of all vocational education programs and provides a strong foundation and vehicle for transitioning into occupational training programs.

These materials were prepared under contract with the Illinois State Board of Education, Department of Adult, Vocational and Technical Education ("Illinois Competency Based Vocational Education Project," contract number FS-10-130).
EMPLOYABILITY SKILLS

DUTY A: Identifying Employment Opportunities

SKILLS: 1 Identify requirements for job
2 Investigate educational opportunities
3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS: 1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up latter
9 Write acceptance letter
10 Evaluate job offer
11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS: 1 Match interest to job area
2 Match aptitudes to job area
3 Verify abilities
4 Identify immediate work goal
5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS: 1 Exhibit dependability
2 Demonstrate punctuality
3 Follow rules and regulations
4 Recognize the consequences of dishonesty
5 Complete assignments in accurate and timely manner
6 Control emotions
7 Assume responsibility for own decisions and actions
8 Exhibit pride and loyalty
9 Exhibit ability to handle pressures and tensions
10 Demonstrate ability to set priorities
11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS: 1 Comply with safety and health rules
2 Select correct tools and equipment
3 Utilize equipment correctly
EMPLOYABILITY SKILLS

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed
EMPLOYABILITY SKILLS

DUTY J: Understanding How a Business Works

SKILLS:
1. Recognize the role of business in the enterprise system
2. Identify general responsibilities of employees
3. Identify general responsibilities of management/employers
4. Investigate opportunities and options for business ownership
5. Identify planning processes needed to open a business
6. Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS:
1. Apply mathematics for problem solving
2. Add and subtract whole numbers, decimals and fractions
3. Multiply and divide whole numbers, decimals and fractions
4. Convert numbers between forms expressed as fractions, decimals and percents
5. Convert between standard American units of measure
6. Convert between standard American units and metric units

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.
DUTY A: Applying Safety Practices

TASKS:
1. Apply basic emergency first aid techniques
2. Complete accident report
3. Inspect work area and equipment for safe working environment
4. Report shop, environmental and equipment safety violations
5. Demonstrate use of fire extinguishers
6. Participate in shop safety committee
7. Correct safety hazards
8. Demonstrate cardiopulmonary resuscitation (CPR) techniques

DUTY B: Analyzing DC Circuits

TASKS:
1. Read and interpret color codes
2. Analyze, construct and troubleshoot series circuits
3. Analyze, construct and troubleshoot parallel circuits
4. Analyze, construct and troubleshoot series-parallel circuits
5. Analyze, construct and troubleshoot voltage dividers
6. Analyze, construct and verify maximum power theory
7. Analyze, construct and troubleshoot resistance x capacitance (RC) and resistance x inductance (RL) circuits

DUTY C: Analyzing AC Circuits

TASKS:
1. Set up and operate frequency counters and signal generators for AC circuits
2. Analyze, construct and troubleshoot AC capacitive circuits using a schematic
3. Analyze, construct and troubleshoot AC inductive circuits using a schematic
4. Analyze and apply principles of transformers to AC circuits using a schematic
5. Analyze, construct and troubleshoot resistor, capacitor and inductor (RCL) circuits using a schematic
6. Analyze, construct and troubleshoot series and parallel resonant circuits using a schematic
7. Analyze, construct and troubleshoot filter circuits using a schematic

DUTY D: Performing Precision Measurement

TASKS:
1. Measure parts with semiprecision measuring tools
2. Inspect parts with precision measuring tools
3. Clean and store precision measuring tools
4. Verify dimensions
5. Verify alignments
6. Verify clearances
7. Inspect assemblies
8. Inspect parts with metric measuring instruments
ELECTRIC HOME APPLIANCE AND POWER TOOL REPAIRER

DUTY E: Operating Drilling Machines

TASKS: 1 Select drills using drill chart
         2 Change drills and tool holders
         3 Center drill and drill holes to size
         4 Perform basic drilling machine maintenance
         5 Set up precision drills

DUTY F: Operating Bench Grinders

TASKS: 1 Change and dress bench grinding wheels
         2 Sharpen and recondition hand tools
         3 Rough grind materials
         4 Perform basic bench grinder maintenance

DUTY G: Performing Benchwork Operations

TASKS: 1 Cut threads with taps and dies
         2 Remove threaded fasteners and repair threads
         3 Finish parts with hand grinders
         4 Disassemble, assemble and straighten parts
            using arbor press
         5 Disassemble, fit and reassemble parts
         6 Repair hand tools
         7 Plan assembly operations
         8 Work materials with hand tools
         9 Work materials with portable power tools

DUTY H: Conducting Shop Operations

TASKS: 1 Answer customer questions
         2 Troubleshoot customer problems
         3 Maintain records of service tools and equipment
         4 Maintain equipment inventory
         5 Maintain call record report
         6 Update service manuals
         7 Update parts catalogs
         8 Modify wiring diagrams to reflect repair changes
         9 Order parts and supplies
        10 Receive and store parts and supplies
        11 Unpack and inspect new equipment
        12 Demonstrate appliance functions
        13 Instruct customer in operation and care of appliance
        14 Complete warranty cards/records
        15 Read maps to locate business
        16 Call for and deliver appliances
        17 Obtain and check work order to determine problem
        18 Determine repair method
        19 Estimate time, cost and feasibility of appliance repair
        20 Estimate time, cost and feasibility of power tool repair
        21 Obtain parts from inventory
        22 Make out materials lists used on each job
        23 Calculate repair costs

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ELECTRIC HOME APPLIANCE AND POWER TOOL REPAIRER

24 Prepare service bill
25 Complete work orders
26 Call office for assistance or next job
27 Make service calls

DUTY I: Performing Housekeeping and Recordkeeping

TASKS:
1. Clean and maintain work area and leave in safe condition
2. Follow tool crib procedures
3. Report problems to supervisor
4. Complete time cards
5. Complete job status reports
6. Make equipment failure reports
7. Use manuals to determine basic maintenance procedures
8. Participate in participation management program (Quality Circles)
9. Complete logs

DUTY J: Troubleshooting and Repairing Precision Mechanisms

TASKS:
1. Align and adjust tension of belt drives
2. Troubleshoot and repair belt drives
3. Remove and replace belt drive pulleys
4. Remove and replace drive belts
5. Clean and lubricate drive systems
6. Remove and replace gear drives
7. Troubleshoot and repair gear drives
8. Align and adjust gear drives
9. Remove and replace variable speed drives
10. Troubleshoot and repair variable speed drives
11. Align and adjust variable speed drives
12. Remove and replace clutch assemblies
13. Troubleshoot and repair clutches
14. Adjust clutches
15. Remove and replace transmissions
16. Troubleshoot and repair transmissions
17. Align and adjust transmissions
18. Troubleshoot and repair couplings
19. Align and adjust couplings
20. Remove and replace packings and seals
21. Troubleshoot and repair bearing assemblies
22. Remove and replace bearing assemblies
23. Remove and replace shaft assemblies
24. Troubleshoot and repair shaft assemblies
25. Align and adjust shaft assemblies
26. Remove and replace universal joints
27. Troubleshoot and repair universal joints
28. Remove and replace linkages and lever mechanisms
29. Troubleshoot and repair linkages and lever mechanisms
30. Align and adjust linkages and lever mechanisms
31. Remove and replace cam assemblies
32. Troubleshoot and repair cam assemblies
33. Align and adjust cam assemblies
34. Remove and replace door-latch assemblies
35 Align and adjust door-latch assemblies
36 Remove and replace door hardware
37 Align and adjust door hardware
38 Remove and replace door gaskets
39 Adjust appliance brake system
40 Remove and replace appliance brake system
41 Troubleshoot and repair appliance brake system
42 Remove and replace appliance drum rollers
43 Adjust appliance drum rollers
44 Remove and replace appliance drums
45 Troubleshoot and repair appliance drums
46 Align and adjust appliance drums
47 Remove and replace appliance fan blades and impellers
48 Clean appliances
49 Touch up appliance cabinets
50 Troubleshoot appliance mechanical problems
51 Lubricate appliances

DUTY K: Maintaining and Repairing Appliance Plumbing Systems

TASKS: 1 Bend copper tubing with spring bender
2 Braze pipes with gas torch and filler metal
3 Cut copper tubing and pipes with hacksaw
4 Cut copper tubing and pipes with tubing cutter
5 Join copper tubing to steel pipes
6 Remove and replace copper tubing connectors
7 Repair copper tubing connectors
8 Remove and replace hoses, couplings and gaskets
9 Remove and replace appliance water valves
10 Troubleshoot and repair appliance water valves
11 Remove and replace appliance water pumps
12 Troubleshoot and repair appliance water pumps
13 Remove and replace appliance float sensors and switches
14 Troubleshoot and repair appliance float sensors and switches
15 Remove and replace appliance pressure sensors and switches
16 Troubleshoot and repair appliance pressure sensors and switches
17 Repair appliance watertight containers or units
18 Troubleshoot appliance plumbing systems
19 Remove and replace appliance plumbing system filters

DUTY L: Maintaining and Repairing Appliance Heating and Cooling Systems

TASKS: 1 Calibrate and adjust appliance thermostat
2 Remove and replace appliance thermostat
3 Troubleshoot and repair appliance thermostat
4 Calibrate and adjust appliance thermocouple
5 Remove and replace appliance thermocouple
6 Troubleshoot and repair appliance thermocouple
7 Lubricate appliance air compressor
8 Adjust appliance air compressor
9 Remove and replace appliance air compressor
10 Troubleshoot and repair appliance air compressor
11 Clean appliance condenser/evaporator
DUTY M: Maintaining and Repairing Electrical Systems

TASKS: 1 Replace fuses
2 Troubleshoot and repair fuse system
3 Troubleshoot electrical control components
4 Replace faulty electrical cords and plugs
5 Remove and replace motor controls
6 Troubleshoot and repair motor controls
7 Lubricate electric motor
8 Remove and replace electric motor
9 Troubleshoot and repair electric motor
10 Remove and replace electric motor starter circuit
11 Calibrate and adjust sensors
12 Remove and replace sensors
13 Troubleshoot and repair sensors
14 Remove and replace microwave oven magnetron tube
15 Troubleshoot and repair microwave oven magnetron tube
16 Remove and replace power supply
17 Troubleshoot and repair power supply
18 Remove and replace solenoid
19 Remove and replace condenser
20 Remove and replace power transformer
21 Troubleshoot and repair power transformer
22 Remove and replace panel lights
23 Remove and replace appliance buzzers and chimes
24 Troubleshoot and repair appliance light and sound systems
25 Remove and replace relays and timers
26 Troubleshoot and repair relays and timers
27 Remove and replace circuit breakers
28 Check for overloaded circuits
29 Wire parallel circuits
30 Wire series circuits
31 Wire series-parallel circuits
32 Connect single pole switches
33 Install single pole switches with pilot light
34 Install timer or delayed action switches
35 Remove and replace switches
36 Troubleshoot and repair switches
37 Remove and replace defective wiring
38 Clean electrical connections
39 Determine adequacy of home wiring
40 Determine electrical problems using available troubleshooting techniques
41 Interpret control diagrams for electrical systems
42 Diagnose malfunctions of electrical systems using test and measurement equipment

DUTY N: Maintaining and Repairing Electronic Systems

TASKS: 1 Determine electronic problems using available troubleshooting techniques
2 Interpret control diagrams for electronic systems
3 Diagnose malfunctions of electronic systems using available test and measurement equipment
4 Remove and replace printed circuit boards
5 Remove and replace chips
6 Remove and replace transistors
7 Remove and replace electronic components
8 Clean connections on electronic components
9 Set user switches
10 Troubleshoot and repair electronic components
ELECTRIC HOME APPLIANCE AND POWER TOOL REPAIRER

DUTY O: Installing Major Appliances

TASKS: 1 Install dishwasher
        2 Install electric washing machine
        3 Install electric clothes dryer
        4 Install gas clothes dryer
        5 Install window air conditioner
        6 Install electric range
        7 Install gas range
        8 Install refrigerator
        9 Install freezer
       10 Install trash compactor
       11 Install garbage disposal
       12 Install microwave oven
       13 Install icemaker
       14 Install other major appliances
       15 Level major appliance
       16 Adjust doors and latches
       17 Adjust appliance to specifications
       18 Inspect appliance to verify operation

DUTY P: Troubleshooting and Repairing Major Appliances

TASKS: 1 Troubleshoot and repair dishwasher
        2 Troubleshoot and repair electric washing machine
        3 Troubleshoot and repair electric clothes dryer
        4 Troubleshoot and repair gas clothes dryer
        5 Troubleshoot and repair window air conditioner
        6 Troubleshoot and repair electric range
        7 Troubleshoot and repair gas range
        8 Troubleshoot and repair refrigerator
        9 Troubleshoot and repair freezer
       10 Troubleshoot and repair trash compactor
       11 Troubleshoot and repair garbage disposal
       12 Troubleshoot and repair microwave oven
       13 Troubleshoot and repair other major appliances

DUTY Q: Troubleshooting and Repairing Small Appliances

TASKS: 1 Troubleshoot and repair vacuum cleaner
        2 Troubleshoot and repair humidifier
        3 Troubleshoot and repair dehumidifier
        4 Troubleshoot and repair other small appliances

DUTY R: Troubleshooting and Repairing Bench Power Tools

TASKS: 1 Troubleshoot and repair table saw
        2 Troubleshoot and repair radial arm saw
        3 Troubleshoot and repair band saw
        4 Troubleshoot and repair scroll saw
        5 Troubleshoot and repair bench lathe
        6 Troubleshoot and repair bench grinder
        7 Troubleshoot and repair planer
8 Troubleshoot and repair joiner
9 Troubleshoot and repair bench drill press
10 Troubleshoot and repair shop vac
11 Troubleshoot and repair power miter box
12 Troubleshoot and repair disk and belt sander
13 Troubleshoot and repair other bench power tools

DUTY S: Troubleshooting and Repairing Hand Power Tools

TASKS:
1 Troubleshoot and repair circular saws
2 Troubleshoot and repair drills
3 Troubleshoot and repair jig saw
4 Troubleshoot and repair router
5 Troubleshoot and repair rotary sander
6 Troubleshoot and repair belt sander
7 Troubleshoot and repair reciprocating sander
8 Troubleshoot and repair power screwdrivers
9 Troubleshoot and repair staple guns
10 Troubleshoot and repair other hand power tools

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.
INDUSTRIAL OCCUPATIONS

Office Machine/Cash Register Repairer

*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.
NOTE:
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DUTY A: Identifying Employment Opportunities

SKILLS: 1 Identify requirements for job
         2 Investigate educational opportunities
         3 Investigate occupational opportunities
         4 Locate resources for finding employment
         5 Confer with prospective employers
         6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS: 1 Locate job openings
         2 Document skills and abilities (resume)
         3 Prepare for interview
         4 Participate in interview
         5 Complete required tests
         6 Complete required forms
         7 Write application letter
         8 Write follow-up letter
         9 Write acceptance letter
        10 Evaluate job offer
        11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS: 1 Match interest to job area
         2 Match aptitudes to job area
         3 Verify abilities
         4 Identify immediate work goal
         5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS: 1 Exhibit dependability
         2 Demonstrate punctuality
         3 Follow rules and regulations
         4 Recognize the consequences of dishonesty
         5 Complete assignments in accurate and timely manner
         6 Control emotions
         7 Assume responsibility for own decisions and actions
         8 Exhibit pride and loyalty
         9 Exhibit ability to handle pressures and tensions
        10 Demonstrate ability to set priorities
        11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS: 1 Comply with safety and health rules
         2 Select correct tools and equipment
         3 Utilize equipment correctly
EMPLOYABILITY SKILLS

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS:
1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS:
1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS:
1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS:
1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed
DUTY J: Understanding How a Business Works

SKILLS: 1 Recognize the role of business in the enterprise system
2 Identify general responsibilities of employees
3 Identify general responsibilities of management/employers
4 Investigate opportunities and options for business ownership
5 Identify planning processes needed to open a business
6 Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS: 1 Apply mathematics for problem solving
2 Add and subtract whole numbers, decimals and fractions
3 Multiply and divide whole numbers, decimals and fractions
4 Convert numbers between forms expressed as fractions, decimals and percents
5 Convert between standard American units of measure
6 Convert between standard American units and metric units

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.
OFFICE MACHINE/CASH REGISTER REPAIRER

DUTY A: Applying Safety Practices

TASKS:
1. Apply basic emergency first aid techniques
2. Complete accident report
3. Inspect work area and equipment for safe working environment
4. Report shop, environmental and equipment safety violations
5. Demonstrate use of fire extinguishers
6. Participate in shop safety committee
7. Correct safety hazards
8. Demonstrate cardiopulmonary resuscitation (CPR) techniques

DUTY B: Analyzing DC Circuits

TASKS:
1. Read and interpret color codes
2. Analyze, construct and troubleshoot series circuits
3. Analyze, construct and troubleshoot parallel circuits
4. Analyze, construct and troubleshoot series-parallel circuits
5. Analyze, construct and troubleshoot voltage dividers
6. Analyze, construct and verify maximum power theory
7. Analyze, construct and troubleshoot resistance x capacitance (RC) and resistance x inductance (RL) circuits

DUTY C: Analyzing AC Circuits

TASKS:
1. Set up and operate frequency counters and signal generators for AC circuits
2. Analyze, construct and troubleshoot AC capacitive circuits using a schematic
3. Analyze, construct and troubleshoot AC inductive circuits using a schematic
4. Analyze and apply principles of transformers to AC circuits using a schematic
5. Analyze, construct and troubleshoot resistor, capacitor and inductor (RCL) circuits using a schematic
6. Analyze, construct and troubleshoot series and parallel resonant circuits using a schematic
7. Analyze, construct and troubleshoot filter circuits using a schematic

DUTY D: Analyzing Solid State Devices

TASKS:
1. Analyze, construct and troubleshoot simple common base amplifiers using a schematic
2. Analyze, construct and troubleshoot simple common emitters using a schematic
3. Analyze, construct and troubleshoot simple common collectors using a schematic
4. Examine field effect transistor (FET) characteristics
5. Analyze, construct and troubleshoot simple common sources using a schematic
6. Analyze, construct and troubleshoot simple common drains using a schematic
7 Analyze, construct and troubleshoot simple common gains using a schematic
8 Analyze, construct and troubleshoot thyristors using a schematic
9 Analyze, construct and troubleshoot integrated circuit operational amplifiers using a schematic
10 Analyze, construct and troubleshoot optoelectronic devices using a schematic

DUTY E: Conducting Shop Operations

TASKS:
1 Answer customer questions
2 Troubleshoot customer problems
3 Perform public relations activities
4 Establish customer and equipment history file
5 Establish customer files
6 Maintain records of service tools and equipment
7 Maintain equipment inventory
8 Maintain call record report
9 Update service manuals
10 Update parts catalogs
11 Update on-site maintenance log
12 Order parts and supplies
13 Receive and store parts and supplies
14 Unpack and inspect new equipment
15 Prepare items for shipping
16 Demonstrate office equipment functions
17 Instruct customer in operation and care of office equipment
18 Complete warranty cards/records
19 Read maps to locate business
20 Call for and deliver office machines
21 Obtain and check work order to determine problem
22 Determine repair method
23 Estimate time and cost of office equipment repair
24 Obtain parts from inventory
25 Obtain loaner item from inventory
26 Make out materials lists used on each job
27 Calculate repair costs
28 Complete a sales slip
29 Prepare service bill
30 Complete work orders
31 Call office for assistance or next job
32 Make service calls

DUTY F: Performing Housekeeping and Recordkeeping

TASKS:
1 Clean and maintain work area and leave in safe condition
2 Follow tool crib procedures
3 Report problems to supervisor
4 Complete time cards
5 Complete job status reports
6 Make equipment failure reports
7 Use manuals to determine basic maintenance procedures
8 Participate in participation management program (Quality Circles)
9 Complete logs

DUTY G: Troubleshooting and Repairing Precision Mechanisms

TASKS:
1 Align and adjust tension of belt drives
2 Troubleshoot and repair belt drives
3 Remove and replace belt drive pulleys
4 Remove and replace drive belts
5 Clean and lubricate drive systems
6 Remove and replace gear drives
7 Troubleshoot and repair gear drives
8 Align and adjust gear drives
9 Remove and replace variable speed drives
10 Troubleshoot and repair variable speed drives
11 Align and adjust variable speed drives
12 Remove and replace cycle clutch drives
13 Troubleshoot and repair cycle clutch drives
14 Align and adjust cycle clutch drives
15 Remove and replace chain drives
16 Troubleshoot and repair chain drives
17 Align and adjust chain drives
18 Remove and replace clutch assemblies
19 Troubleshoot and repair clutches
20 Adjust clutches
21 Remove and replace transmissions
22 Troubleshoot and repair transmissions
23 Align and adjust transmissions
24 Troubleshoot and repair couplings
25 Align and adjust couplings
26 Remove and replace packings and seals
27 Troubleshoot and repair bearing assemblies
28 Remove and replace bearing assemblies
29 Remove and replace shaft assemblies
30 Troubleshoot and repair shaft assemblies
31 Align and adjust shaft assemblies
32 Remove and replace universal joints
33 Troubleshoot and repair universal joints
34 Remove and replace linkages and lever mechanisms
35 Troubleshoot and repair linkages and lever mechanisms
36 Align and adjust linkages and lever mechanisms
37 Remove and replace cam assemblies
38 Troubleshoot and repair cam assemblies
39 Align and adjust cam assemblies
40 Remove and replace door-latch assemblies
41 Align and adjust door-latch assemblies
42 Remove and replace door hardware
43 Align and adjust door hardware
44 Remove and replace door gaskets
45 Lubricate office machines
46 Remove and replace platens
47 Troubleshoot and repair platens
48 Align and adjust platens
49 Remove and replace rollers
50 Troubleshoot and repair rollers
51 Align and adjust rollers
52 Remove and replace escapement mechanisms
53 Troubleshoot and repair escapement mechanisms
54 Align and adjust escapement mechanisms
55 Remove and replace print carriers
56 Troubleshoot and repair print carriers
57 Align and adjust print carriers
58 Remove and replace print wheels
59 Remove and replace print unit
60 Remove and replace print head
61 Remove and replace ribbons or cartridge
62 Remove and replace keyboards
63 Troubleshoot and repair keyboards
64 Remove and replace switches on keyboards
65 Clean keyboards

DUTY H: Maintaining and Repairing Electrical Systems

TASKS:
1 Replace fuses
2 Troubleshoot and repair fuse system
3 Troubleshoot electrical control components
4 Replace faulty electrical cords and plugs
5 Remove and replace motor controls
6 Troubleshoot and repair motor controls
7 Lubricate electric motor
8 Remove and replace electric motor
9 Troubleshoot and repair electric motor
10 Remove and replace electric motor starter circuit
11 Calibrate and adjust sensors
12 Remove and replace sensors
13 Troubleshoot and repair sensors
14 Remove and replace power supply
15 Troubleshoot and repair power supply
16 Remove and replace solenoid
17 Remove and replace condensor
18 Remove and replace power transformer
19 Troubleshoot and repair power transformer
20 Remove and replace panel lights
21 Remove and replace relays and timers
22 Troubleshoot and repair relays and timers
23 Remove and replace circuit breakers
24 Check for overloaded circuits
25 Wire parallel circuits
26 Wire series circuits
27 Wire series-parallel circuits
28 Connect single pole switches
29 Install timer or delayed action switches
30 Remove and replace switches
31 Troubleshoot and repair switches
32 Remove and replace defective wiring
33 Clean electrical connections
34 Determine adequacy of office wiring
35 Determine electrical problems using available troubleshooting techniques
OFFICE MACHINE/CASH REGISTER REPAIRER

36 Interpret control diagrams for electrical systems
37 Diagnose malfunctions of electrical systems using test and measurement equipment

DUTY I: Maintaining and Repairing Electronic Systems

TASKS:  
1. Determine electronic problems using available troubleshooting techniques
2. Interpret control diagrams for electronic systems
3. Diagnose malfunctions of electronic systems using available test and measurement equipment
4. Remove and replace printed circuit boards
5. Troubleshoot and repair printed circuit boards
6. Remove and replace logic boards
7. Troubleshoot and repair logic boards
8. Remove and replace memory boards
9. Troubleshoot and repair memory boards
10. Remove and replace chips
11. Remove and replace transistors
12. Remove and replace electronic components
13. Clean connections on electronic components
14. Set configuration switches
15. Set user switches
16. Troubleshoot and repair electronic components

DUTY J: Maintaining and Repairing Mechanical Typewriters

TASKS:  
1. Diagnose mechanical typewriter problems
2. Operate mechanical typewriter to determine if problem is equipment or operator related
3. Clean mechanical typewriters
4. Disassemble mechanical typewriters
5. Remove and replace worn parts on mechanical typewriters
6. Lubricate mechanical typewriters
7. Assemble mechanical typewriters
8. Adjust mechanical typewriters
9. Perform minor maintenance on mechanical typewriters
10. Troubleshoot and repair mechanical typewriters

DUTY K: Maintaining and Repairing Electromechanical Typewriters

TASKS:  
1. Diagnose electromechanical typewriter problems using schematic and block diagrams and test equipment
2. Operate electromechanical typewriter to determine if problem is equipment or operator related
3. Troubleshoot and repair op-cam shaft problems on electromechanical typewriters
4. Remove and replace op-cam shafts on electromechanical typewriters
5. Adjust op-cam shafts on electromechanical typewriters
6. Perform preventive maintenance on electromechanical typewriters
7. Troubleshoot and repair electromechanical typewriters
DUTY L: Maintaining and Repairing Electronic Typewriters

TASKS: 1 Diagnose electronic typewriter problems using schematic and block diagrams and test equipment
        2 Operate electronic typewriter to determine if problem is equipment or operator related
        3 Troubleshoot and repair electronic typewriter displays
        4 Remove and replace electronic typewriter displays
        5 Clean electronic typewriter
        6 Perform preventive maintenance on electronic typewriter
        7 Troubleshoot and repair electronic typewriters

DUTY M: Maintaining and Repairing Printing Calculators

TASKS: 1 Diagnose printing calculator problems using schematic and block diagrams and test equipment
        2 Operate printing calculator to determine if problem is equipment, software or operator related
        3 Clean electronic printing calculator
        4 Troubleshoot and repair electronic printing calculator

DUTY N: Maintaining and Repairing Cash Registers

TASKS: 1 Diagnose cash register problems using schematic and block diagrams and test equipment
        2 Operate cash register to determine if problem is equipment, software or operator related
        3 Troubleshoot and repair cash registers
        4 Remove and replace cash register cash drawers
        5 Adjust cash register cash drawers
        6 Perform preventive maintenance on cash registers

DUTY O: Maintaining and Repairing Copy Machines

TASKS: 1 Diagnose copy machine problems using schematic and block diagrams and test equipment
        2 Operate copy machine to determine if problem is equipment or operator related
        3 Perform preventive maintenance on copy machine
        4 Troubleshoot and repair copy machine optic system
        5 Remove and replace copy machine optic system
        6 Adjust copy machine optic system
        7 Perform preventive maintenance on copy machine optic system
        8 Clean copy machine optic system
        9 Replace copy machine developer and toner
        10 Clean copy machine mirrors
        11 Troubleshoot and repair copy machine rollers
        12 Remove and replace copy machine rollers
        13 Remove and replace copy machine wiper blades
        14 Remove and replace copy machine lamps
        15 Troubleshoot and repair copy machine wiring
        16 Remove and replace copy machine wiring harness
17 Clear copy machine paper jams
18 Troubleshoot and repair copy machine paper feed mechanism
19 Remove and replace copy machine paper feed mechanism
20 Troubleshoot and repair copy machine sorters/collator
21 Remove and replace copy machine sorters/collator
22 Remove and replace copy machine drums
23 Troubleshoot and repair copy machine document feeders
24 Remove and replace copy machine document feeders
25 Replace copy machine defuser oil
26 Remove and replace copy machine stapler
27 Troubleshoot and repair copy machine stapler
28 Replace copy machine staples

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.
INDUSTRIAL OCCUPATIONS

Correction Officers and Jailers

*Employability Skills

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EMPLOYABILITY SKILLS

DUTY A: Identifying Employment Opportunities

SKILLS:
1. Identify requirements for job
2. Investigate educational opportunities
3. Investigate occupational opportunities
4. Locate resources for finding employment
5. Confer with prospective employers
6. Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS:
1. Locate job openings
2. Document skills and abilities (resume)
3. Prepare for interview
4. Participate in interview
5. Complete required tests
6. Complete required forms
7. Write application letter
8. Write follow-up letter
9. Write acceptance letter
10. Evaluate job offer
11. Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS:
1. Match interest to job area
2. Match aptitudes to job area
3. Verify abilities
4. Identify immediate work goal
5. Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS:
1. Exhibit dependability
2. Demonstrate punctuality
3. Follow rules and regulations
4. Recognize the consequences of dishonesty
5. Complete assignments in accurate and timely manner
6. Control emotions
7. Assume responsibility for own decisions and actions
8. Exhibit pride and loyalty
9. Exhibit ability to handle pressures and tensions
10. Demonstrate ability to set priorities
11. Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS:
1. Comply with safety and health rules
2. Select correct tools and equipment
3. Utilize equipment correctly
EMPLOYABILITY SKILLS

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed
DUTY J: Understanding How a Business Works

SKILLS:
1. Recognize the role of business in the enterprise system
2. Identify general responsibilities of employees
3. Identify general responsibilities of management/employers
4. Investigate opportunities and options for business ownership
5. Identify planning processes needed to open a business
6. Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS:
1. Apply mathematics for problem solving
2. Add and subtract whole numbers, decimals and fractions
3. Multiply and divide whole numbers, decimals and fractions
4. Convert numbers between forms expressed as fractions, decimals and percents
5. Convert between standard American units of measure
6. Convert between standard American units and metric units

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.
DUTY A: Acquiring and Maintaining a Uniform

TASKS:  1 Acquire uniform
        2 Maintain the uniform in serviceable condition
        3 Care for and clean equipment

DUTY B: Patrolling Areas

TASKS:  1 Demonstrate foot patrol methods
        2 Patrol area on foot
        3 Inspect patrol vehicle and equipment
        4 Demonstrate vehicle patrol methods
        5 Patrol area in a vehicle

DUTY C: Handling Misdemeanors

TASKS:  1 Handle officer-witnessed misdemeanors
        2 Handle misdemeanors not witnessed by an officer

DUTY D: Handling Felonies

TASKS:  1 Manage felony calls
        2 Complete a preliminary felony investigation
        3 Gather and process physical evidence of a felony

DUTY E: Making Arrests

TASKS:  1 Assess the arrest situation
        2 Make the arrest
        3 Inform suspect of their rights

DUTY F: Testifying in Court

TASKS:  1 Prepare for court
        2 Testify in court

DUTY G: Maintaining and Using Weapons

TASKS:  1 Inspect handguns
        2 Care for and maintain handguns
        3 Qualify with handguns
        4 Use handguns
        5 Secure handguns
        6 Inspect shotguns
        7 Care for and maintain shotguns
        8 Qualify with shotguns
        9 Use shotguns
       10 Secure shotguns
       11 Inspect shoulder arms
       12 Care for and maintain shoulder arms
13 Qualify with shoulder arms
14 Use shoulder arms
15 Secure shoulder arms
16 Use chemical agents for control

DUTY H: Handling Fire Scenes

TASKS: 1 Assess the fire scene situation
        2 Expedite fire fighting efforts
        3 Guard fire lines and property at the fire scene

DUTY I: Handling Disaster Scenes

TASKS: 1 Assess the disaster scene situation
        2 Expedite disaster scene rescue efforts
        3 Guard disaster scene lines and property

DUTY J: Handling Unlawful Gatherings

TASKS: 1 Assess the situation at the scene of an unlawful gathering
        2 Detect persons inciting or agitating a gathering
        3 Remove persons inciting or agitating a gathering

DUTY K: Handling Public Service Calls and Inquiries

TASKS: 1 Receive inquiries
        2 Respond to inquiries
        3 Receive public service calls
        4 Respond to public service calls

DUTY L: Handling Mentally Ill Persons

TASKS: 1 Assess the situation and mental condition of the person
        2 Determine the safest and best techniques to take the
           mentally ill person into custody
        3 Take the mentally ill person into custody
        4 Transport the mentally ill person to evaluation center
        5 Check the mentally ill person into mental health facility

DUTY M: Handling the Service and Return of Court Documents

TASKS: 1 Receive document and determine type (civil, criminal)
        2 Determine a plan for servicing a service document
        3 Return any pertinent information and the document
DUTY N: Handling Suspicious Persons

Tasks: 1 Assess the situation involving a suspicious person
        2 Confront and question suspicious person
        3 Record and report information on suspicious person

DUTY Q: Handling a Dead On Arrival (DOA)

Tasks: 1 Receive and record information on the DOA
        2 Assess the condition of the victim
        3 Perform preliminary investigation on the DOA
        4 Make arrests if warranted

DUTY P: Conducting Emergency Procedures

Tasks: 1 Administer first aid to relieve shock
        2 Administer first aid for burns
        3 Administer cardiopulmonary resuscitation (CPR)
        4 Administer back pressure/arm lift artificial resuscitation
        5 Administer mouth-to-mouth artificial resuscitation
        6 Conduct a fire drill
        7 Respond to apparent epileptic seizure
        8 Respond to apparent diabetic coma or insulin shock
        9 Respond to suicide attempt
        10 Respond to escape or escape attempt
        11 Respond to hostage situation

DUTY Q: Handling Special Events

Tasks: 1 Prepare for special events
        2 Handle large gatherings

DUTY R: Handling Gambling, Vice and Sex Offenses

Tasks: 1 Detect gambling offenses
        2 Detect sex offenses

DUTY S: Filing Reports and Serving on Committees

Tasks: 1 Select form and format for report
        2 Complete reports
        3 Complete a property report
        4 Complete a denial of treatment or service form
        5 Complete a log
        6 Prepare an observation report for confined inmates
        7 Complete an incident report form
        8 Complete a corrective consultation report
        9 Complete a disciplinary report
        10 Complete a "use of force" report
        11 Conduct a disciplinary report investigation
        12 Serve on a classification hearing
13 Serve on a disciplinary report hearing
14 Complete referrals for psychological evaluation
15 Review a transfer order for compliance

DUTY T: Dealing with Confidential Informants

TASKS: 1 Develop informant contacts
2 Use informant contacts
3 Protect confidentiality of informants

DUTY U: Booking Prisoners

TASKS: 1 Book prisoners
2 Complete arrest paperwork
3 Evaluate possibility for bonding
4 Oversee exit bonding procedures
5 Fingerprint arrestee
6 Photograph arrestee
7 Conduct prisoner shower/spray
8 Evaluate prisoner for medical screening

DUTY V: Conducting Searches and Seizures

TASKS: 1 Search an open area
2 Search an enclosed area
3 Search a vehicle
4 Search person using a frisk search
5 Search person using a strip search

DUTY W: Restraining Violators

TASKS: 1 Restrain person with hand hold
2 Restrain person with physical methods
3 Restrain person with handcuffs
4 Restrain person with leg irons
5 Restrain inmate with straitjacket

DUTY X: Applying Narcotic Enforcement

TASKS: 1 Determine if narcotic crime is being planned or committed
2 Identify narcotic law violators
3 Obtain information and evidence of narcotic law violation
4 Locate contraband or stolen property

DUTY Y: Handling Alcohol Impaired Persons

TASKS: 1 Assess the situation and condition of the alcohol impaired person
2 Determine the safest and best techniques to take the alcohol impaired person into custody
CORRECTION OFFICERS AND JAILORS

3 Take the alcohol impaired person into custody
4 Collect information and evidence of liquor violation
5 Transport the alcohol impaired person to evaluation center
6 Check the alcohol impaired person into appropriate facility

DUTY Z: Handling a Bomb Threat

TASKS: 1 Evacuate threatened premises and surrounding area
2 Conduct preliminary bomb search
3 Call in bomb squad for disposition of suspicious materials

DUTY AA: Performing Guard Duty

TASKS: 1 Escort/guard designated persons
2 Escort/guard money carriers
3 Coordinate guard functions with other agencies
4 Check area of employer's premises
5 Prepare guard plans
6 Determine physical security manpower requirements
7 Develop physical security emergency control plans
8 Issue guard orders
9 Inspect posts
10 Monitor guard operations
11 Monitor prisoners
12 Monitor curfews
13 Relieve guard personnel
14 Guard entry/exit to restricted areas
15 Guard gate or fixed post
16 Guard perimeters of employer's premises
17 Secure housing areas
18 Test intrusion detection systems
19 Investigate intrusions detected by alarms
20 Transport arrestees/persons in custody
21 Transport prisoners
22 Control personnel/vehicle movement in restricted area
23 Conduct vehicle escorts
24 Establish barricades/roadblocks
25 Send and receive radio transmissions
26 Inspect mail
27 Prepare list of confiscated and mailed items
28 Detect and report pilferage incidents
29 Detect and report sabotage incidents
30 Investigate reports of sabotage/pilferage
31 Check and verify passes and badges
32 Maintain ID card/badges log
33 Maintain access list/log
34 Maintain visitor log
35 Provide guidance/information to visitors
36 Maintain lock and key list/log
37 Control locks and keys
38 Investigate lock and key losses
39 Work with guard dogs
Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.
INDUSTRIAL OCCUPATIONS

Commercial Artists

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SKILLS: 1 Locate job openings
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SKILLS: 1 Comply with safety and health rules
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EMPLOYABILITY SKILLS

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SKILLS: 1 Participate in company or agency orientation
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SKILLS: 1 Recognize the role of business in the enterprise system
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SKILLS: 1 Apply mathematics for problem solving
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COMMERCIAL ARTISTS

DUTY A: Applying Safety Practices

TASKS:
1. Comply with shop and equipment safety rules
2. Apply basic emergency first aid techniques
3. Complete accident report
4. Inspect work area and equipment for safe working environment
5. Report shop, environmental and equipment safety violations
6. Demonstrate use of fire extinguishers
7. Correct safety hazards
8. Demonstrate cardiopulmonary resuscitation (CPR) techniques
9. Participate in safety training program

DUTY B: Performing Housekeeping and Recordkeeping Activities

TASKS:
1. Clean and maintain work area and leave in safe condition
2. Report problems to supervisor
3. Maintain records
4. Coordinate work with other departments
5. Complete time cards
6. Complete job status reports
7. Calculate time and materials
8. Participate in participative management program (Quality Circles)

DUTY C: Conducting Shop Operations

TASKS:
1. Answer customer questions
2. Troubleshoot customer problems
3. Requisition art supplies and materials
4. Order art supplies and materials
5. Store art supplies
6. Inventory supplies
7. Guide and direct the work of graphic design team
8. Prepare estimates and bids on graphic arts jobs
9. Negotiate art and production work with prospective clients
10. Complete graphic art assignment contract
11. Complete expense record
12. Establish and maintain appointment/assignment book
13. Complete customer billing for commercial assignment
14. Maintain art reference files
15. File completed customer orders and negatives
16. Interpret and apply copyright laws
17. Complete business license application
18. Set up a studio
19. Evaluate design team work
20. Control design efforts to meet job requirements and limits
21. Withhold release of inadequate design
22. Present client with alternative designs
23. Prepare portfolio of artwork
24. Maintain presentational portfolio
COMMERCIAL ARTISTS

25 Display artwork
26 Order prints from lab
27 Determine production volume and select production processes
28 Plan and schedule work assignments
29 Give directions to printers
30 Give directions to photographer
31 Communicate with freelancers
32 Communicate with department heads
33 Communicate with media personnel
34 Advertise services
35 Plan work areas
36 Maintain work areas

DUTY D: Producing Comprehensive Layouts

TASKS: 1 Establish visual directions and specifications for layout
2 Make thumbnails of layout
3 Design rough layouts
4 Select mediums for comprehensive layouts
5 Select type styles and illustration styles for layouts
6 Design artwork and placement of elements in layouts
7 Mark color or colors to be used for layouts
8 Mark percentage of enlargements or reductions required on photographs
9 Letter layouts and designs
10 Make dummy layout of multipage printed product for signature specifications
11 Produce rough layouts
12 Mark copy for typesetting
13 Prepare layout for presentation
14 Prepare comprehensive layouts
15 Revise layout to customer specifications

DUTY E: Analyzing and Defining Design Problems

TASKS: 1 Interpret and define basic design function
2 Specify physical requirements and limits of design
3 Interpret design requirements of client
4 Analyze focal point of specific public group
5 Explore and collect ideas and definitions of design problem from design team
6 Determine nature of distractions from design

DUTY F: Applying and Analyzing Color

TASKS: 1 Select and prepare color media
2 Select and apply color to emphasize central theme
3 Select and apply color to create visual focal image
4 Select and apply color to distort or create illusion
5 Select and apply color to make minor points
6 Select and apply color to create image of character
7 Select and apply color to create image to further purpose of client
COMMERCIAL ARTISTS

8 Select and apply color to create depth
9 Select and apply color to create physical impression
10 Select and apply color to take advantage of tradition and convention
11 Select and apply color to arouse basic emotion
12 Select and apply color to arrest attention

DUTY G: Composing Artwork

TASKS: 1 Compose artwork in terms of normal eye movement
2 Compose artwork to direct attention to key message
3 Compose artwork to use the unusual as eye-catching visual focus
4 Compose artwork to maintain clarity of theme
5 Compose artwork to perceive and isolate a theme
6 Compose artwork to develop a central theme
7 Compose artwork to create visual impact
8 Compose artwork to create an illusion

DUTY H: Applying Drawing Skills

TASKS: 1 Produce scratchboard illustrations
2 Sketch and rough out ideas and design
3 Illustrate scenes with line techniques
4 Illustrate scenes with pen and ink
5 Illustrate scenes with brush and wash
6 Illustrate scenes with one-point perspective
7 Illustrate scenes with two-point perspective
8 Illustrate scenes with three-point perspective
9 Illustrate scenes with three-dimensional shapes
10 Illustrate scenes depicting light and its effects
11 Illustrate scenes with shading techniques
12 Illustrate scenes with still life objects
13 Illustrate scenes with buildings
14 Draw architectural illustrations
15 Produce house exterior illustrations
16 Produce house interior illustrations
17 Illustrate scenes with furniture
18 Produce schematic diagrams of equipment
19 Illustrate scenes with fashion figures
20 Illustrate scenes with heads and faces
21 Illustrate scenes with caricatures
22 Illustrate scenes with animals
23 Illustrate scenes with wildlife
24 Illustrate scenes with landscapes
25 Prepare color separation drawings
26 Prepare and maintain drawing tools and equipment
27 Establish accurate size and proportions in artwork
28 Adapt drawings to desired ideas, mood or effect
29 Stylize drawings through distortion and use of effects
30 Draw final artwork
31 Select and purchase final artwork
32 Determine final art style
COMMERCIAL ARTISTS

DUTY I: Applying Lettering Skills

TASKS:
1. Select lettering style and type for job
2. Letter layouts and designs using transfer lettering
3. Letter layouts and designs with speedball pen
4. Letter layouts and designs with a brush
5. Letter layouts and designs mechanically
6. Letter layouts and designs with pen and ink
7. Letter artwork using drop shading techniques
8. Letter artwork using striping techniques
9. Letter artwork freehand
10. Layout lettering for illustrations
11. Produce lettering for illustrations
12. Hand letter, balance and proportion basic letter forms
13. Analyze letter traditions and trends and select best design for desired effect
14. Design new letter forms
15. Draw final hand lettering for artwork
16. Select and purchase final hand lettering for artwork

DUTY J: Producing Airbrushed Artwork

TASKS:
1. Select and mix airbrush paints
2. Prepare and maintain airbrush equipment
3. Render artwork with airbrush
4. Render drawings using airbrush techniques

DUTY K: Producing Cartoons

TASKS:
1. Sketch rough storyboard
2. Draw cartoon characters
3. Animate drawings

DUTY L: Creating Functional Designs

TASKS:
1. Render designs and define sizes, materials and limitations
2. Analyze and base design on standardized materials
3. Analyze and base design on natural materials
4. Construct three-dimensional models
5. Determine cost, size, function and other product criteria limits
6. Design displays
7. Design functional packaging
8. Produce design to meet psychological needs
9. Produce design to meet needs for comfort and convenience
10. Produce designs that maintain realistic balance between functional and creative design
11. Experiment with materials to determine qualities and design limitations
12. Design brochures
13. Design pamphlets
14. Design a logo
15. Design magazine ads
COMMERCIAL ARTISTS

16 Research specifications for ads in various media
17 Produce prints using commercial materials
18 Prepare artwork for transparencies or slides
19 Produce graphics for letterpress process
20 Produce graphics for offset process
21 Produce graphics for silk-screen process
22 Produce signs on posterboard
23 Prepare charts
24 Prepare graphs
25 Prepare graphic illustrations for television
26 Prepare fashion illustrations
27 Prepare arts for newspapers
28 Prepare arts for posters
29 Prepare arts for collaterals
30 Prepare arts for specialty advertising
31 Prepare arts for signages
32 Prepare arts for audiovisuals
33 Prepare arts for points of purchase
34 Prepare arts for outdoor advertisements
35 Prepare other functional designs

DUTY M: Applying Graphic Arts Photography

TASKS:
1 Use photo mechanical transfer paper negative
2 Produce photomechanical transfer paper positive
3 Produce photomechanical transfer film positive
4 Produce photomechanical transfer and film negatives
5 Produce photomechanical transfer halftone
6 Retouch photographs
7 Select locations for photography session
8 Select models for photography session
9 Select props for photography session
10 Give directions to models
11 Evaluate the use of photography in graphic design
12 Combine photographs and artwork
13 Crop photographs
14 Consult with photographer
15 Incorporate photographs in artwork
16 Expose photographs using contact halftone screens
17 Make line enlargements/reductions using graphic arts camera and processor
18 Retouch existing black and white photographs
19 Proof camera-ready copy for photo reproduction quality

DUTY N: Preparing Mechanicals

TASKS:
1 Add registration and trim marks
2 Apply border tapes
3 Apply dry-transfer letters
4 Apply dry-transfer screen tints and shading film
5 Attach artwork to mechanical
6 Crop and size photographs
7 Cut outlines of artwork in masking film
8 Cut panels for halftones and reverses
COMMERCIAL ARTISTS

9 Draw reference and centering lines on masking sheets
10 Draw up base sheet for final paste-up
11 Locate and paste up clip art
12 Prepare tissue overlays
13 Opaque photostat imperfections
14 Paste up type matter in position on base sheet (flat)
15 Position and secure protective tissue
16 Position and secure overlays
17 Proof all proportions and sizes with job specifications
18 Proof mechanical flat against copy and dummy layout
19 Select typeface for design effect desired
20 Crop up board for reproduction
21 Add bleed to a keyline
22 Read guide photos and bleed panels
23 Put register marks on board and overlay
24 Crop, size and key photos
25 Flap and tissue keyline art
26 Lay out and paste up for four-color separation
27 Prepare mechanical for stationary items
28 Prepare mechanical for one-color calendar
29 Prepare mechanical for one-color grocery paste-up
30 Prepare mechanical for one-color ruled forms
31 Prepare mechanical for newsletter with stripping corrections
32 Prepare mechanical for postal mailer using overlays
33 Prepare mechanical for catalog pages
34 Prepare mechanical using keyline techniques
35 Prepare mechanical using transfer letters and tint overlays
36 Prepare mechanical to achieve multiple color effects
37 Perform photocropping and scaling techniques
38 Prepare mechanical for a process color brochure
39 Prepare other mechanicals
40 Mark up copy for typesetting

DUTY 0: Reproducing Artwork

TASKS: 1 Reproduce photographs
2 Reproduce artwork using copy machines
3 Reproduce artwork using thermofax machines
4 Reproduce artwork using diazo machines
5 Reproduce artwork using other processes

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INDUSTRIAL OCCUPATIONS

Photographers

*Employability Skills

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DUTY A: Identifying Employment Opportunities

SKILLS: 1 Identify requirements for job
2 Investigate educational opportunities
3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS: 1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up letter
9 Write acceptance letter
10 Evaluate job offer
11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS: 1 Match interest to job area
2 Match aptitudes to job area
3 Verify abilities
4 Identify immediate work goal
5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS: 1 Exhibit dependability
2 Demonstrate punctuality
3 Follow rules and regulations
4 Recognize the consequences of dishonesty
5 Complete assignments in accurate and timely manner
6 Control emotions
7 Assume responsibility for own decisions and actions
8 Exhibit pride and loyalty
9 Exhibit ability to handle pressures and tensions
10 Demonstrate ability to set priorities
11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS: 1 Comply with safety and health rules
2 Select correct tools and equipment
3 Utilize equipment correctly
EMPLOYABILITY SKILLS

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed
EMPLOYABILITY SKILLS

DUTY J: Understanding How a Business Works

SKILLS: 1 Recognize the role of business in the enterprise system
2 Identify general responsibilities of employees
3 Identify general responsibilities of management/employers
4 Investigate opportunities and options for business ownership
5 Identify planning processes needed to open a business
6 Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS: 1 Apply mathematics for problem solving
2 Add and subtract whole numbers, decimals and fractions
3 Multiply and divide whole numbers, decimals and fractions
4 Convert numbers between forms expressed as fractions, decimals and percents
5 Convert between standard American units of measure
6 Convert between standard American units and metric units

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.
PHOTOGRAPHERS

DUTY A: Applying Safety Practices

TASKS: 1 Comply with shop and equipment safety rules
2 Apply basic emergency first aid techniques
3 Complete accident report
4 Inspect work area and equipment for safe working environment
5 Report shop, environmental and equipment safety violations
6 Demonstrate use of fire extinguishers
7 Participate in shop safety committee
8 Correct safety hazards
9 Demonstrate cardiopulmonary resuscitation (CPR) techniques
10 Participate in safety training program
11 Comply with safety rules for working with photographic chemicals

DUTY B: Performing Housekeeping and Recordkeeping Activities

TASKS: 1 Clean and maintain work area and leave in safe condition
2 Report problems to supervisor
3 Maintain records
4 Coordinate work with other departments
5 Complete time cards
6 Complete job status reports
7 Calculate time and materials
8 Make equipment failure reports
9 Read and interpret specifications on job ticket
10 Determine basic maintenance procedures using manuals
11 Participate in participative management program (Quality Circles)
12 Requisition photographic supplies and materials
13 Order photographic supplies and materials
14 Store photographic supplies
15 Store photographic chemicals

DUTY C: Conducting Shop Operations

TASKS: 1 Answer customer questions
2 Troubleshoot customer problems
3 Maintain equipment inventory
4 Guide and direct the work of photography team
5 Prepare estimates and bids on photographic jobs
6 Complete photography assignment contract
7 Complete photograph release form
8 Complete expense record
9 Arrange photography session
10 Establish and maintain appointment/assignment book
11 Complete customer billing for commercial assignment
12 File completed customer orders and negatives
13 Interpret and apply copyright laws
14 Complete business license application
PHOTOGRAPHERS

15 Set up a photography studio
16 Set up a darkroom
17 Purchase photographic equipment
18 Purchase photographic supplies
19 Evaluate photographic work
20 Prepare portfolio of photographic work
21 Assemble and exhibit proofbook
22 Display photographic work
23 Order prints from lab
24 Advertise services
25 Store and transport cameras and accessories

DUTY D: Performing Camera Work

TASKS:
1 Read job order to determine photographic information
2 Select camera and film for job
3 Select camera lenses for a job
4 Select camera accessories for a job
5 Select and use tripods
6 Select and use filters
7 Calculate aperture and set F-stop
8 Calculate and set shutter speeds
9 Calculate time and set timer
10 Expose film using 35mm camera
11 Expose film using view camera
12 Expose film using medium format camera
13 Expose film using twin lens reflex camera
14 Expose film using aerial camera
15 Expose film using special cameras
16 Expose instant film using film pack holder
17 Expose film using computer-assisted cameras

DUTY E: Determining and Setting Up Lighting

TASKS:
1 Determine light readings using exposure meters
2 Determine light readings using grey cards
3 Determine light readings using light meters
4 Determine strobe light readings using flash meters
5 Determine light reading for product with generated light source
6 Calculate the need for additional lights
7 Set up supplementary lights
8 Select, set up and use reflectors
9 Set up lighting for outdoor available light
10 Set up lighting for outdoor artificial light
11 Set up combination available and artificial light
12 Set up lighting for studio portrait
13 Set up high key portrait lighting in studio
14 Set up lighting for tabletop objects
15 Set up lighting for large objects in studio
16 Set up lighting for large objects on location
17 Set up lighting for copy stand
18 Set up lighting for rear/front view projection
PHOTOGRAPHERS

19 Calculate main and flash exposure
20 Calculate filtration exposure
21 Make basic exposure test

DUTY F: Photographing Subjects

TASKS: 1 Select locations for photography session
2 Select models for photography session
3 Select props for photography session
4 Give directions to models
5 Pose and relax people
6 Photograph individual in studio
7 Photograph individual on location
8 Photograph group in studio
9 Photograph group on location
10 Photograph individual for passport/alien resident picture
11 Photograph weddings
12 Photograph tabletop objects
13 Photograph large objects in studio
14 Photograph large objects on location
15 Photograph interiors
16 Photograph exteriors
17 Photograph food
18 Photograph fashion items in studio
19 Photograph fashion items on location
20 Photograph objects: using macro lens
21 Take photograph for environmental impact documentation
22 Take photograph for equipment/hardware documentation
23 Take aerial photographs
24 Photograph commercial products
25 Photograph merchandise
26 Photograph press conference
27 Photograph news events
28 Photograph feature stories
29 Photograph sports events
30 Take photographs using multiple exposure techniques
31 Solve photographic problems

DUTY G: Performing Darkroom Work

TASKS: 1 Prepare darkroom and arrange equipment
2 Mix photographic chemicals
3 Process black and white film using daylight tank
4 Process black and white film using automatic processor
5 Process black and white film using trays
6 Process color negative film using daylight tank
7 Process color negative film using automatic processor
8 Process color negative film using trays
9 Process color transparency film using daylight tank
10 Process color transparency film using automatic processor
11 Duplicate slides
12 Produce special effects title slides
13 Produce multi-image graphic slides
14 Retouch black and white negative
PHOTOGRAPHERS

15 Process control strip in automatic processor
16 Monitor silver recovery unit
17 Recover photographic silver
18 Load film canisters
19 Solve darkroom problems

DUTY H: Printing Photographic Images

TASKS: 1 Expose black and white paper for enlargements
2 Expose contact sheet
3 Expose contact print
4 Expose color paper for enlargement
5 Dodge/burn in image during printing
6 Vignette image during printing
7 Diffuse image during printing
8 Print tone-line conversion
9 Posterize photograph
10 Print sabatier effect enlargement
11 Sandwich negatives during printing
12 Copy black and white slide
13 Copy color slide
14 Copy print using view camera
15 Clean negatives
16 Establish exposure for black and white print using analyzer
17 Establish exposure for black and white print using test strip
18 Establish color filtration and exposure for color paper using analyzer
19 Establish filtration and exposure for color paper using test strip

DUTY I: Processing Photographic Paper

TASKS: 1 Mix stock solution for paper
2 Process black and white paper using trays
3 Process black and white paper using automatic processor
4 Process black and white paper using stabilization processor
5 Process color paper using trays
6 Process color paper using automatic processor
7 Process color paper using drum/tube processing
8 Process print archivally

DUTY J: Finishing Prints

TASKS: 1 Tone print
2 Bleach print
3 Spot print
4 Airbrush print
5 Retouch print
6 Etch print
7 Trim print
8 Spray-finish print
PHOTOGRAPHERS

9 Dry mount print
10 Position print on matte
11 Mount slides

DUTY K: Cleaning and Maintaining Darkroom

TASKS:
1 Clean darkroom sinks
2 Clean darkroom trays and mixing utensils
3 Inspect mechanical components of cameras
4 Clean photographic cameras
5 Clean photographic lenses
6 Perform minor maintenance on photographic cameras
7 Clean automatic film processor
8 Perform minor maintenance on automatic film processor
9 Clean daylight tank processing unit
10 Clean drum/tube processing unit
11 Clean stabilization processing unit
12 Clean automatic film dryer
13 Perform minor maintenance on automatic film dryer
14 Clean silver recovery unit
15 Perform minor maintenance on silver recovery unit
16 Maintain dustfree darkroom environment
17 Maintain darkroom equipment
18 Clean illumination system
19 Perform minor maintenance on illumination system
20 Solve darkroom problems

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INDUSTRIAL OCCUPATIONS

Telephone and Cable TV Line Installers/Repairers
*Employability Skills

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        6 Demonstrate use of fire extinguishers
        7 Correct safety hazards
        8 Demonstrate cardiopulmonary resuscitation (CPR) techniques
        9 Participate in safety training program

DUTY B: Planning Day's Activities

TASKS: 1 Prepare for the day's work
        2 Organize workload
        3 Determine route
        4 Check stock and equipment

DUTY C: Traveling to Job Site

TASKS: 1 Inspect vehicle
        2 Drive defensively
        3 Locate the address
        4 Park vehicle
        5 Secure vehicle
        6 Protect work area (WAP)

DUTY D: Communicating with Customer

TASKS: 1 Identify self
        2 Verify the work order
        3 Explain work to be done
        4 Present added service options for possible sale
        5 Get customer/owner approval for work to be done

DUTY E: Planning Job on the Job Site

TASKS: 1 Visualize total job
        2 Identify potential safety hazards
        3 Organize tools and materials
        4 Determine most efficient route to job site
DUTY F: Performing Work Assignment or Installation

TASKS:
1. Activate service drop at pole or pedestal
2. Complete drop work to company specs
3. Protect or ground service at the house
4. Perform necessary tests

DUTY G: Performing Work Assignment or Repair Service of Installation

TASKS:
1. Identify service problem
2. Isolate service problem
3. Make repairs on installation
4. Refer repairs to qualified person if needed
5. Explain service status to customer

DUTY H: Wrapping-up

TASKS:
1. Clean up work area
2. Educate customer on service and equipment
3. Review service options
4. Check for customer satisfaction
5. Close out the job (paperwork/data base)

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5 Report shop, environmental and equipment safety violations
6 Demonstrate use of fire extinguishers
7 Participate in disaster control exercises
8 Participate in shop safety committee
9 Correct safety hazards
10 Demonstrate cardiopulmonary resuscitation (CPR) techniques
11 Participate in safety training program

DUTY B: Performing Housekeeping and Recordkeeping Activities

TASKS: 1 Clean and maintain work area and leave in safe condition
2 Report problems to supervisor
3 Maintain records
4 Coordinate work with other departments
5 Complete time cards
6 Complete job status reports
7 Calculate time and materials
8 Make equipment failure reports
9 Determine basic maintenance procedures using manuals
10 Participate in participative management program (Quality Circles)
11 Maintain log on film and chemical expiration dates

DUTY C: Marking Copy

TASKS: 1 Read job order to determine composition information
2 Mark up copy
3 Measure type size
4 Measure leading
5 Measure line length
6 Measure tabular column length and indents
7 Measure horizontal and vertical rules
8 Determine location of graphics
9 Select type font, size, and leading for job

DUTY D: Programming and Setting Up Composing Machines

TASKS: 1 Set composing machine margins, leadings, and tabs
2 Set composing machine impression
3 Set composing machine justification
4 Select and change ribbon in composing machine
5 Adjust parameters throughout job on composing machine
6 Set newspaper and newsletter copy on composing machine
7 Set invoice, application, billing and other forms on composing machine
8 Set display advertising copy on composing machine
9 Set letterhead, envelope, business card copy, books, manuals, reports, brochures, circulars, or flyers on composing machine
10 Set lists, indexes, and tables on composing machine
11 Adjust composing machine copy
12 Insert paper in composing machine
13 Verify set up of composing machine
14 Adjust composing machine
15 Proofread composing machine copy
16 Produce phototypeset hard copy reader proof
17 Submit phototypeset output for proof reading
18 Read proofreaders marks and make indicated corrections in composing machine copy
19 Read editors marks and make indicated corrections in composing machine copy
20 Correct grammar and spelling in composing machine copy
21 Correct typographical errors in composing machine copy
22 Fit text and graphics to layout in composing machine
23 Inspect and adjust composing machine copy for density
24 Inspect and adjust composing machine copy for alignment
25 Inspect and adjust composing machine copy for leading and margins
26 Inspect and adjust composing machine copy for type styles, family, and size
27 Produce final composing machine typeset

DUTY E: Programming and Setting Up Phototypesetting, Digital and Desktop Publishing Equipment

TASKS: 1 Enter layout specifications on typesetting or desktop publishing equipment
2 Write formats for typesetting or desktop publishing equipment
3 Receive off line data
4 Receive telecommunication data
5 Check system error report/documentation
6 Determine if hardware/software problem
7 Correct coding
8 Determine and set margins, leadings and tabs
9 Determine and set light density on phototypesetting equipment
10 Set justification on phototypesetting equipment
11 Adjust parameters throughout job on typesetting or desktop publishing equipment
12 Keyboard newspaper and newsletter copy on typesetting or desktop publishing equipment
13 Keyboard invoice, application, billing and other forms on typesetting or desktop publishing equipment
14 Keyboard display advertising copy on typesetting or desktop publishing equipment
15 Keyboard letterhead, envelope, business card copy, book, manuals, reports, brochures, circulars, or flyers on typesetting or desktop publishing equipment
16 Keyboard lists, indexes, and tables on typesetting or desktop publishing equipment
17 Enter keyboarded copy into memory
18 Enter keyboarded copy into photo unit
19 Enter formats for page pagination on typesetting or desktop publishing equipment
20 Load fcnts into output devices
21 Load typesetter with film or paper
22 Proofread typeset copy on screen
23 Produce phototypeset soft copy reader proof
24 Produce typeset hard copy reader proof
25 Submit typeset output for proof reading
26 Read proofreaders marks and make indicated corrections in typeset copy
27 Read editors marks and make indicated corrections in typeset copy
28 Correct grammar and spelling in typeset copy
29 Correct typeset typographical errors
30 Fit text and graphics to layout in phototypeset copy
31 Inspect and adjust phototypeset copy for density
32 Inspect and adjust phototypeset copy for alignment
33 Inspect and adjust typeset copy for leading and margins
34 Inspect and adjust typeset copy for type styles, family, and size
35 Update job file
36 Produce final typeset copy
37 Archive job file
38 Merge text and graphics using software applications packages
39 Complete a global search and edit or replace words and/or text
40 Create structured graphics; flowcharts, diagrams, graphs, technical drawings or charts
41 Input text and graphics using optical scanners
42 Open, move, resize and close a window
43 Back-up the system

DUTY F: Developing Phototypesetting Film

TASKS: 1 Select and mix developing chemicals
2 Fill processor with chemicals
3 Transfer film to processor
4 Develop film using processor
5 Dry film
6 Match dried film to original copy
7 Identify and adjust film density problems
DUTY G: Maintaining Electronic Job Files

TASKS: 1 Save files on disk
        2 Retrieve files from disk
        3 Delete unneeded files from disk storage
        4 Transfer files from damaged disk to new disk
        5 Store disks
        6 Update disk log
        7 Update font information
        8 Update front end programs (software programs)

DUTY H: Performing Basic Maintenance on Typesetting Equipment

TASKS: 1 Adjust screen intensity and brightness
        2 Clean photo unit type fonts
        3 Clean keyboard
        4 Clean photo unit dust filters
        5 Clean photo unit lens filters, lenses and mirrors
        6 Empty chemicals in processor
        7 Clean processor
        8 Clean exterior of keyboard, photo and processor unit
        9 Replace lamp bulbs in photo unit
        10 Perform basic maintenance on processor
        11 Perform basic maintenance on photo unit
        12 Perform basic maintenance on terminal and keyboard
        13 Arrange for repairperson to make call or schedule repairs
        14 Perform basic maintenance on composing machines

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