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IDENTIFIERS DACUM Process; Workplace Literacy

## ABSTRACT

This packet contains sample DACUM (Developing a Curriculum) materials developed for two companies (The Hibbert Group and Trane Corporation). For the Hibbert Group, materials include the following: job and task descriptions for data services, inventory control, planning, and quality services personnel; a curriculum for those employees in reading, writing, mathematics, oral communication and interpersonal skills, technology in the workplace, and problem-solving and critical thinking skills that includes goals and topics; job and task descriptions for production and warehouse personnel; and a curriculum in reading, writing, oral communication and interpersonal skills, mathematics, technology in the workplace, English as a second language, and problem-solving skills for those employees with goals and course topics. The Trane Corporation materials are as follows: job and task descriptions for assemblers who build heating and air conditioning units and a curriculum for those employees that includes reading, writing, oral communication and interpersonal skills, mathematics, technology in the workplace, problem-solving skills and English as a second language, with goals and suggested course topics. (KC)

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ED 368 988

**Skills for Tomorrow  
Workplace Skills Project  
DACUM Charts**

Mercer County Community College

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# SKILLS FOR TOMORROW

## DACUM THE HIBBERT GROUP JOB DESCRIPTION

### Data Services, Inventory Control, Planning and Quality Assurance

#### DACUM PANEL MEMBERS

**Carole DeHart** - Planner  
**Patricia Duncan** - Account Coordinator  
**Kim Henderson** - Order Processing Clerk  
**Pamela Martin** - Quality Assurance  
**Chris Mazzoni** - Sr. Account Coordinator. Data Services  
**Melinda Stinson** - Teleservices Representative  
**Lisa Wagner** - Sr. Customer Service Representative

#### DACUM FACILITATORS

**Nunzio Cernero**  
Organization Development Specialist. MCCC  
**Elaine Weinberg**  
Director. Workplace Literacy Project. MCCC

#### RECORDERS

**Lorna Burt, Carol Lewandowski, Ave Pollak**  
Education Specialists. MCCC  
**Linda Alvarez**  
Administrative Secretary. MCCC

#### DATE

December 8 and 9, 1992

#### LOCATION

Mercer County Community College

**DATA PROCESSING, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** work together as a marketing support team to coordinate timely and accurate processing of customer requests.

**QUALITY ASSURANCE**

**TASKS**

I. Inspector	1. Complete formal training	2. Attend account meetings	3. Review standards with departments	4. Attend vendor seminars			
A. Learn Hibbert's Standards	1. Prepare meeting input	2. Present priority issues report	3. Take notes	4. Suggest recommendations			
B. Attend Department Meeting	1. Read jacket/job	2. Match results against standards	3. Report problem, if required	4. Enter problem on report	5. Communicate problem to supervisor	6. Report success	7. Enter success record on report
C. Monitor Procedures	1. Review existing procedures	2. Identify potential problems	3. Discuss problem areas	4. Recommend procedure changes	5. Report on procedure changes		8. Release jacket or job
D. Maintain Procedures	1. Prepare status report	2. Prepare inspection report	3. Provide verbal reports	4. Research customer complaint reports	5. Attend quality meetings	6. Fax information to customers	
E. Provide Communications	A. Provide advice to other departments on quality issues						
J. Supervisor	A. Enter report data						
II. Quality Data Analyst	A. Analyze information for other departments						
V. Quality Analyst	PLANNER						
A. Prepare a Job Jacket	1. Receive job requests	2. Determine jacket type	3. Log jacket out	4. Input same job information into computer	5. Order materials from outside vendors as necessary	6. Check availability of customer's stock at Hibbert's warehouse	7. Order stock for job samples
B. Develop Schedule	9. Check postal regulations	10. Order stock deductions from inventory	11. Receive authorization number	12. Order transfer of stock within warehouse if necessary	13. Prepare paperwork	14. Write-up job jacket	15. Prioritize job
C. Monitor Progress	17. Release job jacket						16. Quality check job jacket
D. Paperwork	1. Contact vendors	2. Contact other departments	3. Prepare and update master calendar	4. Distribute calendar	5. Notify management of deadline conflicts, if necessary	6. Complete paperwork	
E. Attend Department and Account Team Meetings	1. Review daily schedule	2. Contact vendors	3. Contact other departments by telephone	4. Solve problems	5. Prepare job change notice	6. Attend project meetings	7. Advise customer of progress
G. Communication	1. Prepare job jackets (4 types)	2. Prepare data forms	3. Complete art spec. sheet	4. Complete purchase requisitions	5. Complete delivery receipts	6. Complete status report	7. Complete cutting tickets
	9. Prepare daily status report	2. Inform others of changes					8. Close job file
	1. Report status of jobs	2. Complete status reports	3. Finish special billing forms	4. Complete contact reports	5. Schedule, organize and hold meetings if required	6. Bring questions or updates to meeting	7. Update department progress status
	9. Attend account team meetings if required	10. Attend data team meetings if required	11. Make presentations at meetings when necessary	12. Fax information to customers			8. Attend department and account meetings

**DATA SERVICES**

**I. Direct Mail and Master Project Management Divisions**  
**A. Develop Procedures**

**TASKS**

1. Read jacket to determine needs of job	2. Identify customer requirements	3. Create system specifications	4. Create system tests, if required	5. Initiate programmer and/or data entry requests (PCR)	6. Consult programmer in system setup	7. Run system tests for program accuracy	8. Develop process
9. Assure stock availability	10. Prioritize accounts and duties	3. Run jobs when applicable	4. Observe print process	5. Print PC output when applicable	6. Check accuracy of job sequence	7. Perform quality check	8. Fill out quality control check list(s)
1. Receive phone and fax orders (account specific)	2. Prepare source documents	3. Edit source documents	4. Input data into system	5. Assure quality control of data	6. Verify customer supplied data	7. Obtain quality assurance approval	8. Create sample proofs
1. Receive text copy from planner or customer	2. Key in letter if PC	3. Write text if required	4. Edit and proofread text from customer	5. Notify customer of revisions	6. Create PCR if laser job		
9. Obtain customer and planner approvals	2. Write job instructions which initially came from planner	3. Run jobs when applicable	4. Observe print process	5. Print PC output when applicable	6. Check accuracy of job sequence	7. Perform quality check	8. Fill out quality control check list(s)
9. Box output	10. Complete paperwork	11. Send order to appropriate department	12. Distribute report				
1. Complete quality check list forms	2. Update logs	3. Write instructions for data preparation	4. List job procedures				
1. Discuss program and answer questions with client's customer	2. Follow through updates with external customers	3. Update program with internal personnel	4. Communicate with inventory control/production	5. Provide proactive suggestions to customers if required			
1. Write memos	2. Complete status reports	3. Finish special billing forms	4. Complete contact reports	5. Schedule, organize and hold meetings if required	6. Bring questions or updates to meeting	7. Update department progress status	8. Attend department and account meetings
9. Attend account team meetings if required	10. Attend data team meetings if required	11. Make presentations at meetings when necessary	12. Fax information to customers				
1. Receive file maintenance from customer or planner	2. Apply maintenance to appropriate file	3. Monitor status of control tables i.e. zip codes	4. Perform system maintenance when necessary	5. Perform quality assurance check (if appropriate)	6. Delegate responsibilities (if appropriate)	7. Distribute work flow as required	
1. Review billing reports	2. Make adjustment to billing file	3. Reconcile rebate or product fulfillment program	4. Produce final reports	5. Distribute reports	6. Produce PC reports when necessary		
1. System demonstration	2. Train client on system	3. Train new or cross train employees					
1. Test telephone lines daily	2. Answer phones	3. Read appropriate script to customer	4. Provide consumer referrals	5. Input information in PC manually from customer	6. Batch source documents	7. Forward scripts to key entry	
1. Take maintenance to key entry area	2. Receive maintenance from key entry area if required	3. Apply maintenance to file	4. Verify credit card and checks				
1. Receive output of maintenance file	2. Process output	3. Assure maintenance and reports are correct	4. Remove unnecessary material from output	5. Prepare requisition	6. Distribute hot lead cards to sales rep		
1. Update files (add change or delete)	2. Produce reports on demand for accounts	3. Monitor workload	4. Assist other departments with overflow work				
1. Fill out call log daily	2. Provide daily product status (as per customer request)	3. Complete weekly status report	4. Finish daily time card	5. Prepare monthly billing	6. Create memos as required	7. Take messages when necessary	
1. Update mailing list database	2. Place outbound telephone calls at customer request to create database	3. Complete script	4. Process information as per client's specs				
1. Coordinate accounts	2. Give customer status of account when requested	3. Handle customer complaints	4. Direct calls to appropriate coordinator	5. Attend account meetings and report on account changes	6. Update staff of customer changes	7. Fax information to customers	8. Cross-train co workers for necessary jobs

**H. Database Management**

**I. Billing Reconciliation (if customer requests)**

**J. External Training**

**II. Teleservices**  
**A. Answer Incoming Calls**

**B. Order Processing**

**C. Order Fulfillment**

**D. Database Management**

**E. Complete Paperwork**

**F. Perform Special Outbound Projects**

**G. Communications**

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## TASKS

1. Receive multiple leads from reader services	2. Separate by products, magazines, etc	3. Batch by companies	4. Send to key entry for keying and verification	5. Receive customer specific output from operations	6. Separate labels	7. Check for accuracy, completeness and sequence	8. Send to production for fulfillment
9. Notify sales force when request made							
1. Get report for each company	2. Mail to specific reps	3. Detail reports - month to date	4. Verify account report by magazine year to date	5. Mail information to sales reps			
1. Update information for sales reps to each area	2. Reassign zip codes to correct rep if required						
1. Verify product for order accuracy	2. Update files for correctness						
1. Get job procedure from planning and external customer	2. Set up inventory requirements	3. Update monthly client report	4. Maintain dealer files (customer's customer)	5. Notify all departments of new account			
1. Reconcile number of orders that come in against number of orders that go out	2. Monitor number of items on order	3. Monitor numbers of pieces on order					
1. Edit low and out notices for reordering purposes	2. Edit expired materials notices	3. Instruct warehouse to destroy outdated material	4. Instruct warehouse to do a stock transfer	5. Issue physical counts to warehouse daily	6. Issue adjustments to inventory	7. Review jackets from planning to assure stock deduction	8. Report stock not deducted to appropriate department if necessary
9. Review daily, weekly and monthly reports	10. Issue back order reports to customer for unavailable items (I.O.)						
1. Edit receiver documents	2. Update the inventory of receipt	3. Distribute receiving document to specific personnel and customer	4. Mail sample of items received to customer	5. File receipts			
1. Receive orders	2. Edit orders	3. Batch orders	4. Forward orders to order processing	5. Coordinate distribution of order forms to distributors	6. Trace orders if necessary		
1. Train new employees and co-workers for backup	2. Provide computer training of new systems	3. Train clients on the system					
1. Prepare materials	2. Give the presentation	3. Provide tour for new employees					
1. Receive specifications from customer or sales rep	2. Write PCR to programming	3. Edit report received from programmer	4. Return incorrect report to programmer, if necessary	5. Send correct reports to customer			
1. Communicate through E-mail to customers and internal departments	2. Complete weekly status reports to customer and internal departments	3. Fax information as required	4. Review status reports from planning to determine job completion	5. Distribute updated information to relevant departments	6. Create external and internal memos	7. Attend account, team customer and department meetings	8. Make on-site visits
1. Match picking ticket with requisition	2. Perform physical counts of requisition	3. Separate each order into warehouse location	4. Send orders to production	5. Distribute reports to appropriate departments			
1. Answer phone with appropriate company name and information	2. Prompt customer to answer questions if required	3. Enter order into computer	4. Determine method of shipment and time requirements	5. Give order number to customer or authorization number to planning department	6. Call customer for special authorization	7. Transfer calls to appropriate internal personnel as needed	8. Log in order information
9. Make changes if customer goes not approve							
1. Receive order from customer service	2. Process backorder releases	3. Release inquiry packets	4. Key order into computer	5. Assign order number to service document if necessary	6. Verify accuracy of order either through customer service or quality assurance	7. File documentation	
1. Communicate with other departments	2. Process back order releases	3. Contact production to transfer stock	4. Key order into computer	5. Assign order number to service document if necessary	6. Verify accuracy of order either through customer service or quality assurance	7. File documentation	
1. Key in and verify adjustments to inventory	2. Complete time card	3. Log in order information	4. File out quality order processing report for quality assurance				

## TRAITS AND ATTITUDES

Accurate	Honest	Responsive
C.A.R.E.	Lifelong willing learner	See whole picture
Can follow instructions	Open minded	Self-starter
Career Oriented	Organized	Tactful
Dedicated	Outgoing	Take initiative
Detail oriented	Patient	Task and result oriented
Discreet	People oriented	Team player
Efficient	Pleasant	Thick skinned
Flexible	Proactive	Tolerant
Follow through	Productive	Understanding
Get along with people	Professional	Work independently
Helpful	Punctual	

## TOOLS AND EQUIPMENT

Burster	Envelope	Printed forms
Calculators	Fax	Printer
Computer (Mainframe and PC)	Labels	Schedule
Copy machine	Office Supplies	Shredder
E-mail	Phone (Voice mail)	Typewriter

## KNOWLEDGE AND SKILLS

Active listener  
Basic computer knowledge  
Can delegate responsibility  
Communicate (public speaking and interpersonal)  
Customer service skills  
Decision making  
Follow instructions  
Foreign trade customs  
Handle stress  
High school degree+  
Industrial experience  
Knowledge of when to ask for help  
Math - statistics, billing regulations, basic math, calculators  
Memory skills  
Organizational  
Phone system  
Prioritize  
Problem Solving  
Product knowledge  
Proofreading  
Reading - zip code book, instructions, postal regulations, research, manuals, comprehension, critical details, safety regulations  
Time management  
Typing keyboarding  
Writing - memos, contact reports, document explanations instructions

# SKILLS FOR TOMORROW

## THE HIBBERT GROUP CURRICULUM

### DATA SERVICES, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE

#### DACUM PANEL MEMBERS

Ellen Hricko - Data Services Supervisor  
Yvonne Smith - Inventory Control Supervisor  
Pat Duncan - Data Coordinator  
Lisa Wagner - Senior Customer Service Representative

#### DACUM FACILITATOR

Elaine Weinberg  
Director, Workplace Literacy Project, MCCC

#### RECORDERS

Carol Lewandowski  
Education Specialist, MCCC  
  
Linda Alvarez  
Administrative Secretary, MCCC

#### DATE

December 14, 1992

#### LOCATION

Mercer County Community College



**DATA SERVICES, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** work together as a marketing support team to coordinate timely and accurate processing of customer requests.

## The Curriculum will include:

### READING

#### GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to recognize, comprehend and interpret all written materials necessary to carry out job responsibilities successfully.

#### Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to read and comprehend:

- Company procedures
- Computer screen information
- Critical information
- Customer written requests
- Departmental procedures
- Detailed information
- Discipline actions
- Exceptions
- Get details quickly
- Inferences
- Job jacket instructions
- Material for interpretation
- Materials that must be retained
- Materials that must be summarized
- Memos
- Performance appraisal reviews
- Postage regulations
- Reports and instruction manuals
- Safety instructions and manuals
- Scripts
- Self improvement material
- Shipping and receiving documents
- Source documents

### WRITING

#### GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to write accurately, effectively and concisely in order to communicate with customers and other employees at all levels of the organization.

#### Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to write the following:

- Articles for Horizon
- Business letters
- Contact reports
- Correct form with:
  - Clarity
  - Conciseness
  - Proper grammar
  - Passive and active voice
  - Style
- Interdepartmental resumes and job applications
- Jacket instructions
- Logs-update and create
- Meeting agendas
- Meeting minutes
- Memos
- Notes for meetings
- Personal ideas
- Procedures
- Programming change requests (PCR)
- Proofread
- Rejection letters
- Requests
- Scripts
- Status reports (not more than 2 pages)
- User documentation

### MATHEMATICS

#### GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to perform basic arithmetic functions, provide correct job estimates, reconcile inventory discrepancies, calculate postal regulations accurately, correctly and logically, and evaluate output to determine if correct logic was applied.

#### Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to do:

- Averaging
- Basics (addition, subtraction, multiplication and division)
- Charts and graphs
- Estimating
- Formulas for spreadsheets
- Logic
- Measuring height and weight
- Percentages
- Postal regulations
- Reconciliations

## ORAL COMMUNICATION/ INTERPERSONAL SKILLS

### GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will interact verbally and nonverbally with customers and employees at all levels of the organization, and develop skills in the areas of active listening, giving and receiving instructions, discussing work/job needs/requirements, and perform as team members.

### Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to:

- Be assertive
- Be courteous on the phone
- Communicate effectively
- Communicate potential problems and solutions
- Communicate with all levels of the organization
- Communicate with customers
- Communicate with voice mail
- Cross-train others within the organization
- Deal with criticism
- Deal with difficult people
- Diplomatically say no
- Discuss and resolve errors
- Inform others of progress
- Perform conflict resolution
- Present a positive self-image
- Provide clear, informative, concise instructions
- Resolve conflicts
- Team build
- Use active listening skills
- Use interview skills
- Use public speaking techniques
- Utilize telephone courtesy

## TECHNOLOGY IN THE WORKPLACE

### GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to comprehend and use the PC and mainframe computer terminals and other office equipment, operate simple machines and understand and apply safety procedures in the workplace.

### Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to:

- Adapt to changing technology and software applications
- Handle simple machines
- Understand the DOS and Windows Environments
- Use D-Base and Fox Pro
- Utilize Excel and Word

## PROBLEM SOLVING CRITICAL THINKING

### GOALS:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to state the problem, identify and test alternatives, select the best solution, implement action, and evaluate results.

### Topics:

The **DATA PROCESSING PERSONNEL, INVENTORY CONTROL, PLANNING and QUALITY ASSURANCE** will be able to:

- Adapt to rush situations
- Create proactive problem solving solutions
- Determine accept/reject situations
- Determine solutions for problems
- Explain problem situations
- Handle crisis situations
- Identify problems
- Make judgment calls
- Pay attention to details
- Plan course of action
- Resolve conflict situations
- Respond to emergencies
- Set priorities
- Think critically
- Utilize time management skills

# NOTES

# WORKPLACE BASIC SKILLS

## DACUM THE HIBBERT GROUP WAREHOUSE AND PRODUCTION PERSONNEL

### DACUM PANEL MEMBERS

**John Companick** - Receiver, Warehouse  
**Bob Pettway** - Picker, Packer, Sorter & Meter Operator  
**Luis Matos** - Receiver  
**Joyce Montevino** - Picker  
**Arlene Wharton** - Assembler & Meter Operator  
**Peggy Wingo** - Assembler

### DACUM FACILITATORS

**Lorna Burt, Pat Clopp**  
Education Specialists, MCCC

### RECORDERS

**Carol Lewandowski, Ave Pollak**  
Education Specialists, MCCC  
**Barry Batorsky**  
Curriculum Developer, MCCC

### DIRECTOR

**Elaine Weinberg**  
Workplace Skills Project, MCCC

### DATE

October 13 and 14, 1992

### LOCATION

Mercer County Community College

**PRODUCTION** and **WAREHOUSE PERSONNEL** communicate with each other to receive, locate, pick, pack, mail or ship materials accurately and efficiently.

## TASKS

	1. Fill out Time Card	2. Turn On Equipment	3. Unhook equipment (Jack, Forklift, etc.)	4. Do Maintenance Check	5. Decide on Location (Corporate, Service Center, 21, or Hancock)	6. Communicate if Necessary with Inventory Control	7. Call Premium Supervisor if Receiving Premium Items	8. Check Visually for Damage
<b>I. Receiver</b>								
<b>A. Job Preparation</b>								
<b>B. Unload Truck</b>	1. Communicate with Driver	2. Ask Driver to Check Wheels on Truck	3. Read Bill	4. Decide if Literature or Premium Storage Material	5. Decide on Location (Corporate, Service Center, 21, or Hancock)	6. Communicate if Necessary with Inventory Control	7. Call Premium Supervisor if Receiving Premium Items	8. Check Visually for Damage
<b>C. Log Incoming Items into Computer</b>	9. Decide Which Vehicle to Use (Forklift, Manual Jack, Electric Jack, etc.)	10. Unload	11. Decide on Staging Area (Based on Site)	12. Put Stock in Staging Area	13. Verify Quality	14. Verify Quantity		
<b>D. Receive Stock</b>	1. Read Bill	2. Decide Course of Action	3. Check File for Purchase Order	4. Enter Information into Computer	5. Print Preliminary Receiving Tag	6. Tape Tag to Stock		
<b>E. Pass to Locator</b>	1. Take Items in Order	2. Transport Stock to Table	3. Decide to Average or to Count	4. Transcribe Tag Information to Receiver Form	5. Cut Open Carton(s) According to Procedures	6. Identify Stock for Warehouse	7. Perform Scale Count to Check Quantity	8. Call Inventory Control if No Code
<b>II. Locator</b>	9. Complete Receiver Form	10. Enter Information onto Computer	11. Print Tag From Computer	12. Put Tag on Stock	13. Take Preliminary Tag, Sample, & Written Material to Inventory Control	14. Fill Out Time Card		
<b>A. Job Preparation</b>	1. Decide Whether It is Bulk or Small Shelf Stock	2. Communicate with 2nd Floor Stock to Determine Need for Replenishment	3. Separate and Move This Stock to Appropriate Area	4. Inform Bulk Locator of Exceptions	5. Decide Method of Transport	6. Move Stock	7. Straighten Area After Each Job and at End of Day	
<b>B. Determine Stock Location</b>	1. Fill out Time Card	2. Get Supplies	3. Find Equipment	4. Check Equipment	5. Check for Space Available	6. Decide On Location	7. Decide On Method of Transport	8. Take To Location
<b>C. Locating</b>	1. Check Staging Areas	2. Go To Staging Area	3. Check Amount of Stock To Be Moved	4. Determine by Date Order Which Stock to be Moved First	5. Take Paperwork to Secretary To Be Entered in Computer			
<b>D. Re-Warehousing</b>	1. Put Stock into Location	2. Fill Out Warehouse Slip	3. Fill Out Tag	4. Tag Stock	5. Decide On Space Usage	6. Turn in Forms	7. Fill Out Time Card	
<b>III. Specialty Pickers Scrapper</b>								
<b>A. Job Preparation</b>	1. Decide Whether Space is Appropriate	2. Shift Smaller Quantities to Smaller Location	3. Fill Out Re-Warehouse Slip	4. Fill Out Unload Slip	5. Verify All Scrap Material With Warehouse Manager	6. Remove One Sample for Verification	7. Fill Out Scrap Notice to Inventory Control	
<b>B. Scrap Items</b>	1. Fill out Time Card	2. Receive Scrap Notices from Inventory Control	3. Receive Transfer Notices	4. Decide Course of Action if Any				
<b>Transfer Stock Person</b>	1. Go to Location	2. Check Notice Against Stock	3. Remove Stock	4. Bring Scrap to Scrap Area	5. Pick Items	6. Count Item Quantity	7. Band/Secure Item	8. Return Unused Material
<b>IV. Sorter</b>	9. Inform Manager When Scrap Area Filled	10. Decide on Transport Method	11. Load Scrap Truck	12. Fill Out Time Card				
<b>A. Job Preparation</b>	1. Fill out Time Card	2. Go to Location	3. Check Notice Against Stock	4. Remove Stock	5. Pick Items	6. Count Item Quantity	7. Band/Secure Item	8. Return Unused Material
<b>B. Pick Batches</b>	9. Move On to Next Item on List	10. Deliver Within Building	11. Deliver Outside Material to Messenger Area	13. Straighten Area After Each Job and at End of Day	12. Fill Out Time Card			
<b>C. Sort</b>	1. Fill out Time Card	2. Get Supplies	3. Look at Pick List	4. Look at Graph Sheet for Quantities				
<b>D. Completion of Sorting</b>	1. Verify Order Against Pick List and Graph Sheet	2. Take Requisition and Graph Sheets from Work Table	3. Set up Table According to Graph Sheet	4. Place Stock onto Proper Number on Table				
	1. Count Appropriate Number for Each Square	2. Place Items on Appropriate Square	3. Verify Against Requisition, Pick List and Square for Accuracy	4. Get Off-floor Pieces from Staging Area to Complete Order				
	1. Initial Requisition	2. Place in Basket for on Skid	3. Repeat as Necessary	5. Straighten Area	4. Fill out Time Card			

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## TASKS

<p>V. Physical Count</p> <p>VI. Picker</p> <p style="padding-left: 20px;">A. Job Preparation</p> <p style="padding-left: 20px;">B. Pick Items</p> <p style="padding-left: 20px;">C. Complete Job</p> <p>VII. Assembler</p> <p style="padding-left: 20px;">A. Job Preparation</p> <p style="padding-left: 20px;">B. Collate</p> <p style="padding-left: 20px;">C. Count Sets According to Requisition, Transmittal Form or D-Jacket</p> <p>D. Insert into Envelopes</p> <p style="padding-left: 20px;">E. Make Boxes</p> <p>F. Folding</p> <p>G. De-collate</p> <p>VIII. Packer</p> <p style="padding-left: 20px;">A. Job Preparation</p> <p style="padding-left: 20px;">B. Check Order</p> <p style="padding-left: 20px;">C. Packing</p>	<p>1. Reolve Forms From Inventory Control</p> <p>9. Remove Last Copy for Warehouse File</p> <p>1. Fill out Time Card</p> <p>1. Go To Location</p> <p>9. Return Unused Material</p> <p>17. Use an "Unload Slip" on Depleted Stock</p> <p>1. Do Paperwork</p> <p>1. Fill out Time Card</p> <p>1. Pick Up One Piece of Each Item</p> <p>9. Fill Out Time Card</p> <p>1. Determine Method of Counting by Hand or Scales</p> <p>9. Fill Out Time Card</p> <p>1. Label Envelopes</p> <p>9. Put in Separate Piles</p> <p>1. Put Stock on Table</p> <p>9. Fill Out Time Card</p> <p>1. Fold According to Instructions</p> <p>1. Take Assembled Stock</p> <p>1. Fill Out Time Card</p> <p>1. Check Requisition or Transmittal Form or D-Jacket</p> <p>1. Select Appropriate Size Carton, Bubble Bag, or Tape</p> <p>9. Apply Quality Label to Package</p>	<p>2. Log into Physical Count Binder</p> <p>10. Give Form to Supervisor</p> <p>2. Get Requisitions</p> <p>2. Check Stock Against Requisition or Transmittal Form</p> <p>10. Move On to Next Item on List</p> <p>2. Check Off Items on Requisition List or Transmittal Form</p> <p>2. Read the Requisition, Transmittal Form, or D-Jacket</p> <p>2. Put into Pile, Binder, Envelope, etc.</p> <p>2. Count Amount Required</p> <p>2. Flip Envelopes Open</p> <p>10. Hand Seal if Too Thick</p> <p>2. Inspect Flat Box</p> <p>2. Give Sample to Supervisor</p> <p>2. Open Assembled Stock</p> <p>2. Get Rack/Skid</p> <p>2. Check Picked Items Against Requisition, Transmittal Form or D-Jacket</p> <p>2. Make Box</p> <p>10. Initial Requisition</p>	<p>3. Go To Location</p> <p>11. Straighten Area After Each Job and at End of Day</p> <p>3. Check Supplies (Clips, Bands, etc.)</p> <p>3. Check Error Listing for Alternative Location if Stock is Not There</p> <p>11. Repeat as Necessary</p> <p>3. Initial Requisition List or Transmittal Form</p> <p>3. Check Stock Against Requisition</p> <p>3. Check Number Required</p> <p>3. Secure Stock</p> <p>3. Check if Stock Needs Folding</p> <p>11. Set on Rack, Cart, or Mail Tray for Meter Operator</p> <p>3. Fold on Scored Lines</p> <p>3. Repeat as Required</p> <p>3. Put Each Piece on Separate Pile</p> <p>3. Check Supplies</p> <p>3. Check Mailing Destination</p> <p>3. Place Items into Box</p> <p>11. Clip Perforated Portion of Requisition to Packed Carton</p>	<p>4. Verify Item Code Number</p> <p>12. Fill Out Time Card</p> <p>4. Take Cart/Rack</p> <p>4. Pick Items</p> <p>12. Decide Which Tag to Use if One is Required (Color Coded)</p> <p>4. Place List on Order</p> <p>4. Set Stock in Order on Table</p> <p>4. Decide How Many Per Pile</p> <p>4. Put in Piles</p> <p>4. Fold When Required</p> <p>12. Pass to Meter Operator</p> <p>4. Follow Plans for Box</p> <p>4. Straighten Area After Each Job and at End of Day</p> <p>4. Perform Course of Action from D-Jacket Instruction (Re-use, Discard, Stock)</p> <p>4. Check Equipment</p> <p>4. Check Materials Visually for Quality</p> <p>4. Place Bubble Wrap in Box On Top of Materials</p> <p>12. Decide on Location (Meter Operator, Messenger, Other)</p>	<p>5. Count Stock</p> <p>5. Organize into Batch Orders if Required</p> <p>13. Tag Order</p> <p>5. Fill Out Time Card</p> <p>5. Pack into Box</p> <p>5. Pick Up One Item at a Time</p> <p>5. Straighten Area After Each Job and at End of Day</p> <p>5. Give Sample to Supervisor</p> <p>5. Fill Out Time Card</p> <p>5. Straighten Area After Each Job and at End of Day</p> <p>5. Check Quantity</p> <p>5. Seal Box</p>	<p>6. Fill Out Form</p> <p>6. Count Item Quantity</p> <p>14. Place Order on Rack/Skid</p> <p>6. Fill Rack/Skid</p> <p>6. Have Tools Ready</p> <p>6. Count Materials</p> <p>6. Stack Items on Skid or Pass to Designated Area</p> <p>6. Give Sample to Supervisor</p> <p>14. Fill Out Time Card</p> <p>6. Insert Material if Necessary</p> <p>6. Repeat as Necessary</p> <p>6. Remove Label From Requisition or Packing Slip</p>	<p>7. Verify With Computer</p> <p>7. Decide How to Count Items: Scale, Manual, or Carton Counts</p> <p>15. Decide Status of Stock (Accept?/Reject?)</p> <p>7. Pass Picked Material On to Packer/Sorter/ Staging Area</p> <p>7. Perform Specialty Tasks On Material if Required</p> <p>7. Give Sample to Supervisor</p> <p>7. Give Sample to Supervisor</p> <p>7. Insert One Envelope at a Time</p> <p>7. Stack on Skid</p> <p>7. Place Packing Slip (inside or Outside)</p>	<p>8. Log Out of Binder</p> <p>8. Band/Secure Item</p> <p>16. Complete Order Form to Replenish Used Stock</p> <p>8. Straighten Area After Each Job and at End of Day</p> <p>8. Straighten Area After Each Job and at End of Day</p> <p>8. Straighten Area After Each Job and at End of Day</p> <p>8. Straighten Area After Each Job and at End of Day</p> <p>8. Straighten Area After Each Job and at End of Day</p> <p>8. Straighten Area After Each Job and at End of Day</p> <p>8. Straighten Area After Each Job and at End of Day</p> <p>8. Straighten Area After Each Job and at End of Day</p>
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**TASKS**

**D. Special Packing (Trade Shows)**

**E. Prepare Paperwork**

**IX. Meter Operator**

**A. Job Preparation**

**B. Weigh Materials**

**C. Affix Postage**

**D. Prepare for Shipping**

**X. Shipper**

**A. Job Preparation**

**B. Receive Material From Other Floors**

**C. Check Paperwork**

**D. Documentation**

**E. Loading**

1. Receive From Quality Control After Inspection	2. Apply Company Label	3. Apply Special Labels	4. Place On Conveyor Belt
1. Choose Appropriate Paperwork (Meter Operator, Messenger, etc.)	2. Do Paperwork	3. Send To Location	4. Straighten Area After Each Job and at End of Day
1. Fill Out Time Card	2. Turn On All Equipment	3. Prepare Machine as Necessary	4. Check Supply of Containers
1. Read Requisition or D-Jacket	2. Make Up Meter Slip if No Requisition	3. Weigh Each Type of Package	4. Determine Form of Postage
1. Send Envelopes Through Machine	2. Put Postage on Packages	3. Fill Out Meter Slip	5. Set Meter to Print Amount Required
1. Separate Mail Types	2. Fill Trays or Hamper	3. Close Out the Machine	5. Take Meter or Requisition Slips to Office at Day's End
1. Fill out Time Card	2. Get Check Supplies	3. Check Equipment	6. Straighten Area After Each Job and at End of Day
1. Check Quality	2. Send Damaged Packages Back to Appropriate Department	3. Repair Damaged Goods if Possible	7. Fill Out Time Card
1. Check Quantity	2. Check for Shipping Instructions	3. Determine Shipping Method if Necessary	5. Separate According to Shipper
1. Weigh Unmetered Packages	2. Transcribe Information on Shipping Form	3. Affix Documentation to Material	5. Follow Procedures for Shippers
1. Determine Equipment To Be Used	2. Decide Method of Securing Packages if Necessary	3. Secure Skid Load	5. Call Shippers if Necessary
9. Fill Out Time Card			5. Communicate With Driver
			6. Load
			7. Put Information into Computer
			8. Straighten Area After Each Job and at End of Day

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## TRAITS AND ATTITUDES

Able to accept criticism	Flexible	Punctual
Able to make decisions	Healthy	Quality conscious
Accurate	Mechanical aptitude	Safety conscious
Aware	Neat	Speed
Congenial	Open minded	Tactful
Consistent	Organized	Trustworthy
Courteous	Patient	Willing to learn
Detail oriented	Positive thinker	

## TOOLS AND EQUIPMENT

Allen wrenches	File cabinet (storage)	Pens/Pencils/Markers
Band cutters	Fork lift	Rubber fingers
Bander	Glue/rubber cement	Safety boots
Blades	Hammer	Scales
Broom/dust pan	Hampers	Scissors
Bubble wrap	Hand sealer	Screw driver
Cartons	Hole punch machine	Shrink wrapper
Carts/Racks	Insertor	Sort Wick
Calculator	Jack (electric and manual)	Sponges
Cheshire machine (labels envelopes)	Label machine	Static guard
Chip board	Labels	Steel plate (ramp)
Collators	Ladders	String
Computer/Printer	Letter folder	Tape machines/tape
Copy machine	Mail basket	Telephone
Crow bar	Mail trays	Time clock
Dolly	Meter	Tool box
Envelopes	Pads	White Out/Rubber Bands/Paper clips/Stapler
Fax	Pallet (skid)	Wrapper (manual and electric)
	Paper cutter	Wrench

## KNOWLEDGE AND SKILLS

Communication	Memory Skills
In Person	Remembering each procedure
On Telephone	Paying attention to details, numbers, procedures
Geography	Organization Skills
Knowledge of states, geographic regions, other countries	Operate Manual Tools
Keyboard	Problem Solving/Decision Making
Know How to Maintain Equipment	Product Knowledge
Knowledge of mechanical operations	Reading
Knowledge of simple machines	Paperwork
Knowledge of Work Area	Instructions
Mathematics	Abbreviations
Addition, subtraction, multiplication, division	Procedures
Measuring weights and measures	Reading/Speaking/Understanding English
Counting	Safety Regulations and First Aid
Estimating	Know how to carry loads correctly
Calculating time in decimals	Writing
Military time	Legible handwriting
	Comments
	Forms



# WORKPLACE SKILLS PROJECT

## THE HIBBERT GROUP CURRICULUM

### WAREHOUSE AND PRODUCTION PERSONNEL

#### DACUM PANEL MEMBERS

**Barry Batorsky** - Curriculum Developer  
**Scott Freeman** - Production Supervisor  
**Pat Clopp** - Educational Specialist, MCCC  
**Don McKim** - Literature Fulfillment Manager  
**Luis Matos** - Receiving  
**Bob Pettway** - Production

#### DACUM FACILITATORS

**Lorna Burt**  
Educational Specialist, MCCC

**Elaine Weinberg,**  
Director, Workplace Skills Project, MCCC

#### RECORDER

**Ave Pollak**  
Education Specialist, MCCC

#### DATE

October 16, 1992

#### LOCATION

Mercer County Community College

The **PRODUCTION AND WAREHOUSE PERSONNEL** communicate with each other to receive, locate, pick, pack, mail or ship materials accurately and efficiently.

## The Curriculum will include:

### READING

#### GOALS:

The **PRODUCTION AND WAREHOUSE PERSONNEL** will be able to recognize, comprehend and interpret all written materials necessary to carry out job responsibilities successfully.

#### Topics:

The **PRODUCTION AND WAREHOUSE PERSONNEL** will be able to read:

- Bills of lading
- Company procedure updates
- Company procedures
- Company newsletters
- Company benefit booklets
- Computer screens
- Delivery slips
- Department procedures
- Direct mail jackets
- Discipline action forms
- Information on first aid kit
- Job postings
- Job number for time cards
- Locations
- Memos
- Newspapers
- Numbers
- Paycheck stubs
- Performance appraisal reviews
- Pick sheet
- Postage records
- Requisitions
- Safety signs
- Safety instruction in booklets
- Scales
- Sorting charts
- Transmittal forms

### WRITING

#### GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to use proper punctuation, spelling, and grammar to complete forms, routine paperwork, and special reports.

#### Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to write the following:

- All paperwork with correct spelling
- Articles for "Horizon"
- Bag tags
- Delivery receipts
- ID tags for hampers
- Internal job applications
- Job applications
- Letters to customers
- Location tags
- Location sheets
- Logs
- Long-term forms
- Meeting agendas
- Memos
- Minutes at meeting
- Notes at meeting
- Personnel forms
- Physical count requisition logs
- Postal records
- Production reports
- Re-warehousing slips
- Sign offs
- Stock replenishment forms
- Suggestions
- Time cards
- Unload slips
- Using all types of terminals
- Work orders to maintenance

### ORAL COMMUNICATION/ INTERPERSONAL SKILLS

#### GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will interact verbally and nonverbally with workers at all levels of the organization, and develop skills in the areas of active listening, giving and receiving instructions, discussing work/job needs/requirements, and perform as team members.

#### Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to:

- Build consensus
- Communicate with group leaders
- Communicate with other groups to avoid duplication
- Communicate with co-workers
- Communicate with supervisors
- Conduct personal communication
- Contribute to department quality meetings
- Deal with criticism
- Discuss work-related problems
- Discuss errors
- Give and receive information
- Handle disputes
- Inform others in department of progress of tasks
- Know how to be tactful and diplomatic in work-related situations
- Participate in active listening
- Provide clear, informative instruction
- Report work-related problems
- Talk on phone for work-related issues
- Teach new employees job tasks
- Understand company expectations
- Understand and be aware of co-workers needs, moods, and problems
- Work in teams

## MATHEMATICS

### GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to perform basic arithmetic functions, calculate in decimals, weigh, measure and estimate materials, complete packing and productivity charts and graphs, use decimal time, and complete word problems.

### Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to do:

- Addition and subtraction
- Averages
- Basic geometry (determining space available)
- Calculations with a calculator
- Charts and graphs
- Decimal and military time
- Decimals
- Elementary algebra
- Estimating
- Measure scale counts
- Measuring
- Multiplication and division
- Packing and productivity charts
- Percents
- Postal regulations
- Ratios
- Weighing
- Word problems

## TECHNOLOGY IN THE WORKPLACE

### GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to comprehend mechanical processes and procedures, understand and apply safety procedures in the workplace, read scales, and understand simple machines and computer terminal operations.

### Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to:

- Handle simple machines
- Understand basic science concepts as they relate to the company
- Have basic computer awareness

## ENGLISH AS A SECOND LANGUAGE

### GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to speak, understand and write in English in order to function effectively, efficiently and safely in the workplace.

### Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to:

- Read English
- Speak English well enough to be understood by co-workers
- Understand co-workers
- Understand work-related expressions
- Understand American expressions and idioms
- Write English

## PROBLEM SOLVING

### GOALS:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to state the problem, identify and test alternatives, select the best solution, implement action and evaluate results.

### Topics:

The **WAREHOUSE AND PRODUCTION PERSONNEL** will be able to:

- Accept/reject decision making
- Adapt to changes and improvise
- Anticipate a problem
- Check and make corrections
- Deal with frustration
- Decide priorities
- Draw conclusions
- Make proper assessment of tasks
- Make hypotheses about problems
- Make judgments about work procedures in their own tasks
- Make visual discriminations
- Manage time and equipment priorities during the workday
- Resolve disagreements between co-workers
- Respond to emergencies
- Use critical thinking necessary for job decisions

**NOTES**

# WORKPLACE SKILLS PROJECT

## DACUM TRANE CORPORATION ASSEMBLER OPERATORS

### DACUM PANEL MEMBERS

**Robert Blair** - XL90 Assembler  
**Mary Ann Gallagher** - Assembler - Insight II  
**Shirley Holmes** - Assembler - Insight I  
**Joseph Loncosky, III** - Tube Assembly Coil Area  
**Pat Mazotas** - Autobraze Coil Area  
**Vicki Skorut** - Paper Work Assembler - Insight II  
**Fran Venturino** - A-Line Control Boxes  
**Forrest S. Willis** - Coil Assembly

### DACUM FACILITATORS

**Lorna Burt**  
Education Specialist, MCCC  
**Nunzio Cernero**  
Organization Development Specialist, MCCC

### RECORDERS

**Pat Clopp, Carol Lewandowski, Ave Pollack**  
Education Specialists, MCCC

### DIRECTOR

**Elaine Weinberg**  
Workplace Skills Project, MCCC

### DATE

October 5 and 6, 1992

### LOCATION

Mercer County Community College

The ASSEMBLER is a safety conscious team member who combines various product parts to build quality heating and air conditioning units.

ASSEMBLER POSITION

TASKS

I. Insight I	A. Job Preparation	1. Get Tools	2. Get Safety Equipment	3. Check Schedule	4. Check Travel Card	5. Replenish Parts from Kanban	6. Communicate With Supplier
	B. Check Supplies	1. Check Quantity	2. Check Availability	3. Check Quality	4. Prepare Request (Parts)	5. Inspect Assembly with Travel Card to Verify Work Completed Accurately	6. Communicate With Supplier
	C. Assemble Parts (Sub-Assembly)	1. Determine Model	2. Pick Parts	3. Assemble Parts	4. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	5. Communicate Change-Over	6. Communicate With Supplier
	D. Install Sub-Assembly	1. Obtain Sub-Assembly	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect Unit	4. Perform Repairs	5. Inspect for Quality or Damage	6. Check for Space
	E. Assemble Unit (Partial)	1. Gather Parts	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect for Missing Parts	4. Inspect Placement of Parts		
		7. Push Down Line					
II. Insight II	A. Job Preparation	1. Get Tools	2. Get Safety Equipment	3. Check Travel Card	4. Prepare Request (Parts)	5. Replenish Parts from Kanban	6. Communicate With Supplier
	B. Check Supplies	1. Check Availability	2. Check Quality	3. Check Quantity	4. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	5. Inspect Assembly with Travel Card to Verify Work Completed Accurately	6. Inspect Assembly
	C. Assemble Parts (Sub-Assembly)	1. Determine Model	2. Pick Parts	3. Assemble Parts	4. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant		
	D. Install Sub-Assembly	7. Communicate With Supplier					
		1. Obtain Sub-Assembly	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect Unit	4. Perform Repairs	5. Communicate Change-Over	6. Communicate With Supplier
	E. Assemble Unit (Partial)	1. Gather Parts	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect for Missing Parts	4. Inspect Placement of Parts	5. Inspect for Quality or Damage	6. Check for Space
Specialty Jobs for Insight I & II	Wiring	7. Push Down Line					
	A. Job Preparation	1. Get Tools	2. Get Safety Equipment	3. Check Travel Card	4. Check Parts		
	B. Make Parts	1. Look at Diagram	2. Get Parts	3. Connect Wires and Pins	4. Inspect Parts		
	C. Install Part	1. Review Diagrams	2. Put part in Unit	3. Connect Wires	4. Inspect Connector and Unit	5. Communicate Errors	6. Push Unit to Next Person
		7. Look at Next Travel Card					
	A. Job Preparation	1. Get Safety Equipment	2. Check Travel Card	3. Select Model Number	4. Analyze Results	5. Retest Unit When Appropriate	6. Decide to Accept/Reject
	B. Connect to Tester	1. Connect Electric Wires	2. Connect Gas	3. Observe Results	4. Accept? Send to Paper Station		
	C. Test Unit	1. Start Computer Test	2. Start Manual Test	3. Reject? - Send to Repair	4. Accept? Send to Paper Station		
	D. Disconnect Unit	1. Disconnect Wires	2. Disconnect Gas	3. Review Travel Card			
	A. Job Preparation	1. Get Safety Equipment (Shoes & Gloves)	2. Review Travel Card	3. Check Availability	3. Communicate With Supplier		
	B. Check Papers	1. Check Quantity	2. Check Availability	2. Determine Envelope Content	3. Determine Envelope Quantity		
	C. Look at Travel Card	1. Determine Model Number	2. Pick Name Tag	2. Place Envelope in Unit	3. Scan Cards		
	D. Make Envelopes	1. Place Name Tag on Unit	2. Place Envelope in Unit				
	E. Place Paperwork in Unit						

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**TASKS**

III. XL90	A. Job Preparation	1. Get Tools	2. Get Safety Equipment	3. Check Schedule	4. Check Travel Card	5. Replenish Parts (Signal Light System)	6. Communicate With Supplier
	B. Check Supplies	1. Check Availability	2. Check Quality	3. Check Quantity	4. Prepare Request for Parts	5. Inspect Assembly with Travel Card to Verify Work Completed Accurately	6. Communicate With Supplier
	C. Assemble Parts (Sub-Assembly)	1. Determine Model	2. Pick Parts	3. Assemble Parts	4. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	5. Inspect Assembly with Travel Card to Verify Work Completed Accurately	6. Communicate With Supplier
	D. Install Sub-Assembly	1. Obtain Sub-Assembly	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect Unit	4. Perform Repairs as Necessary	5. Communicate Change-Over	6. Communicate With Supplier
	E. Assemble Unit (Partial)	1. Gather Parts	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect for Missing Parts	4. Inspect Placement of Parts	5. Inspect for Quality or Damage	
Specialty Jobs for XL90 Tester	A. Job Preparation	1. Get Tools and Equipment	2. Check Safety Equipment	3. Connect Gas	4. Select Model Number	5. Retest Unit if Rejected	6. Decide to Accept/Reject
	B. Connect to Tester	1. Review Travel Card	2. Connect Electric Wires	3. Observe Results	4. Analyze Results	5. Retest Unit if Rejected	6. Decide to Accept/Reject
	C. Test Unit	1. Start Computer Test	2. Start Manual Test	3. Accept?-Go to Paper Station	4. Reject? - Send to Repair	5. Apply Label	
	D. Disconnect Unit	1. Disconnect Wires	2. Disconnect Gas				
Paperwork	A. Job Preparation	1. Get Tools and Equipment	2. Check Safety Equipment	3. Check Quantity	4. Communicate With Supplier		
	B. Check Papers and Envelope Contents	1. Look at Travel Card for Model Number and Envelope Content	2. Check Availability				
	C. Make Envelopes	1. Pick Contents	2. Insert Contents in Envelope				
	D. Complete the Unit	1. Place Envelope in Unit	2. Put on Doors	3. Put in Filler	4. Put Labels on Doors		
IV. A Line	A. Job Preparation	1. Get Tools	2. Get Safety Equipment	3. Check Quantity	4. Inspect Assembly		
	B. Check Supplies	1. Check Availability	2. Check Quality	3. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	4. Inspect Assembly		
	C. Assemble Parts (Sub-Assembly)	1. Pick Parts	2. Assemble	3. Inspect Unit	4. Indicate Repairs		
	D. Install Sub-Assembly	1. Obtain Sub-Assembly	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect for Missing Parts	4. Inspect for Placement of Parts	5. Inspect for Quality	
	E. Assemble Unit (Partial)	1. Gather Parts	2. Perform Activities of Drilling Screws, Popping Rivets, Gluing, Connecting Wires, Shooting Sealant	3. Inspect for Missing Parts	4. Inspect for Placement of Parts	5. Inspect for Quality	

**TASKS**

Specialty Jobs for A-Line  
Tests

- A. Job Preparation
- B. Connect Wires
- C. Test

D. Retest Unit from Repair

SPECIALTY CLASSIFICATIONS

- V. Autobraze A. Job Preparation
- B. Assemble Coil
- C. Unload

Vi. Tube Assembly

A. Job Preparation

B. Assemble Product

C. Load Parts

Vii. Coil Assembly

- A. Job Preparation
- B. Test Coils

C. Label Coil

Halo Box

- A. Job Preparation
- B. Remove Failed Coils from Line
- C. Prepare Good Coil to Receive Freon Nitrogen
- D. Test Coil

E. Braze Coil

- A. Job Preparation
- B. Wash Coils

1. Get Safety Equipment	2. Set-Up - Change Test Leads When Required	3. Disconnect	4. Accept? - Go to Next Station	5. Fails? - Send to Repair
1. Connect Wires to Control Box	2. Attach Calibrator			
1. Start Test	2. Analyze Results			
1. Obtain Unit	2. Repeat Tests			
1. Get Safety Equipment	2. Get Print	3. Get Hammer and Pliers	4. Adjust Shelves	5. Adjust Flame
1. Take Coil Out of Carton	2. Place Coil on Carousel	3. Read Print	4. Place Return Bends in Coil	5. Hammer
1. Inspect Coil	2. Fail? a. Take Coil Off b. Send to Repair	3. Pass? a. Take Coil Off b. Place Coil in Carton c. Roll to Other Lines		6. Turn Switch On
1. Get Safety Equipment	2. Receive Voucher	3. Verify Voucher with "Inspection Sheet"	4. Review Blueprint	5. Get Tools
7. Go to Work Station	8. Set Up Fixture	9. Check Parts Quality	10. Check Parts Quantity	11. Check Part Appropriateness
1. Get Manifold	2. Do Flow Check on Manifold a. Accept? - Spray Red b. Reject? - Send Back	3. Place Manifold in Fixture	4. Get Tube Plate	5. Put Orifice in Manifold (as per blueprint)
7. Put Label On	8. Torque Manifold	9. Remove Manifold		6. Accumulate Parts
1. Load on Rack	2. Label Rack	3. Visual Inspection	4. Push Rack Down Line	
1. Get Safety Equipment	2. Check Schedule			
1. Connect Nozzle on Coil	2. Push Pressure Button on Testing Computer	3. Perform Visual Inspection	4. Disconnect Nozzle	5. Fail? a. Mark with Red Tape b. Send to Repair
7. Pass? - Move On				6. Make Minor Repairs
1. Identify Correct Label from Written Schedule	2. Place Label on Coil	3. Put Bushing Over Manifold (for protection)	4. Move Coil to Next Station	
1. Get Safety Equipment	2. Get Tools	3. Locate Parts		
1. Check for Red Tape	2. Remove Coil from Rack	3. Bring Unit to Repair Station		
1. Take Off Line	2. Put Two Rubber Plugs into Holes	3. Secure Plugs with Clamps	4. Raise Hood of HALO Box	5. Place Coil Inside HALO Box
1. Press Button to Start Test (Includes receiving freon)	2. Fails? - Red Light a. Push Recovery Button b. Check Visually for Safety Factor c. Monitor Gauge for Nitrogen d. Take Off Clamps e. Take Coil to Repair Station	3. Pass? - Green Light a. Pinch Off Coil b. Press Recovery Button c. Monitor Gauge	4. Disconnect Hose	5. Remove from HALO Box
1. Pinch Off Tube Head	2. Braze the Head	3. Remove Clamps	4. Attach Baffles to Coil	5. Take to Washer
1. Get Safety Equipment	2. Push Tray Through Washing Machine	3. Unclog Jam When Necessary	4. Take to Repair if Damaged	5. Pass Good Coils to Proper Location
1. Place on Tray				



## TOOLS AND EQUIPMENT

Air Gun	Gloves	Rivet Guns
Allen Keys	Glue Gun	Scales
Banders	Hammers	Scissors
Calculator	Knives	Sleeves
Calibrator	Meters	Tape Measure
Caulk Guns	Micrometers	Travel Card
Diagrams/Blueprints	Ovens	Vice Grips
Earplugs	Pliers	White Coat
Gas Leak Detector	Poke-Yoke	Wrenches
Glasses	Purgers	

## TRAITS AND ATTITUDES

Alert	Good Communicator	Safety Conscious
Considerate	Manual Dexterity	Takes Orders
Copes With Stress	Patient	Well
Dependable	Positive	Tolerant
Easy Going	Responsible	Understanding
Flexible		

## KNOWLEDGE AND SKILLS

Speak and Understand English Communicate in English	Reading Instructions Diagrams/Blueprints Schedules Safety Guides Company Information
Math Addition, Subtraction, Multiplication Read dials, charts, manuals, and rulers Metric Percentages/Ratios Basic Algebraic Equations	Writing Notes Supply Forms Memos Letters
Science Basic Science Basic Electricity Basic Thermodynamics	Technical Skills Reading basic blueprints Tolerances Keyboarding (operating terminal) Typing/Word Processing

# WORKPLACE SKILLS PROJECT

## TRANE CORPORATION CURRICULUM

### ASSEMBLER OPERATORS

#### DACUM PANEL MEMBERS

**Barry Batorsky** - Curriculum Developer  
**Robert Blair** - Assembler-XL 90  
**Tom Carroll** - Supervisor, Insight II  
**Pat Clopp** - Education Specialist, MCCC  
**Mary Ann Gallagher** - Assembler II  
**Dick Hess** - Manager Special Programs  
**Carol Lewandowski** - Education Specialist, MCCC  
**Joseph Loncosky III** - Tube Assembly  
**Byron Taylor** - Trainer  
**Elaine Weinberg** - Director, Workplace Skills Project, MCCC

#### DACUM FACILITATORS

**Lorna Burt**  
Educational Specialist, MCCC

**Nunzio Cernero**  
Organization Development Specialist , MCCC

#### RECORDER

**Ave Pollak**  
Education Specialist, MCCC

#### DATE

October 12, 1992

#### LOCATION

Mercer County Community College

The **ASSEMBLER** is a safety conscious team member who combines various product parts to build quality heating and air conditioning units.

## The Curriculum will include:

### READING

#### GOAL:

The **ASSEMBLER** will be able to recognize, comprehend and interpret all written materials necessary to carry out job responsibilities successfully.

#### Topics:

The **ASSEMBLER** will be able to read:

- Bar charts and line graphs
- Blueprints
- Chemical sheets
- Contract
- Customer complaints
- Diagrams (process sheets)
- Discipline action sheets
- Employee benefits booklet
- Equipment instructions
- Gauges
- Job postings
- Kanban cards
- Labels
- Machine messages (eg. test screen messages)
- Memos
- Menu in cafeteria, and other work survival material
- Monthly safety hand-outs
- MSDS safety sheets
- Part numbers
- Paycheck information
- Procedures on the line
- Product literature
- Repair orders
- Safety hazard warning sheets
- Station breakdown (instructions for job)
- Team meeting notes
- Trane newsletter
- Travel Cards
- Union rules
- Visual discrimination of numbers and colors on lists and Travel Cards and Voucher
- Written rules and regulations

### WRITING

#### GOAL:

The **ASSEMBLER** will be able to use proper punctuation, spelling, and grammar to complete forms, routine paperwork, and special reports.

#### Topics:

The **ASSEMBLER** will be able to write the following:

- Articles for the Union newsletter
- Articles for the TRANE newsletter
- Benefit papers
- Job applications
- Letters to customers
- Logs
- Long-term forms
- Meeting agendas
- Memos
- Minutes at meeting
- Notes at meeting
- Suggestions
- Work orders to maintenance

### ORAL COMMUNICATION/ INTERPERSONAL SKILLS

#### GOAL:

The **ASSEMBLER** will interact verbally and nonverbally with workers at all levels of the organization, and develop skills in the areas of active listening, giving and receiving instructions, discussing work/job needs/requirements, and perform as a team member.

#### Topics:

The **ASSEMBLER** will be able to:

- Accept and respect other workers' ideas, i.e., be open-minded
- Build consensus
- Communicate with supervisors
- Communicate with co-workers
- Communicate with management
- Communicate with other groups to avoid duplication
- Discuss work-related problems
- Focus on the heart of the problem
- Give job-task instruction
- Give and take constructive criticism on job quality
- Help each other by picking up tasks
- Know how to be tactful and diplomatic in work-related situations
- Listen and interpret directions
- Listen to co-workers
- Participate in monthly question and answer sessions
- Practice assertive communication with all levels of management
- Report work-related problems
- Take advantage of "open door" policy
- Understand and be aware of co-workers needs, moods, and problems
- Understand company expectations. (e.g., discipline)
- Understand tasks - area/quality
- Verify equipment with set-up people

## MATHEMATICS

### GOALS:

The **ASSEMBLER** will be able to perform basic arithmetic functions, interpret word problems, complete charts, interpret graphs, use decimals metric and weight measurements, and read and interpret data as required.

### Topics:

The **ASSEMBLER** will be able to do:

- Addition and subtraction
- Bar charts and line graphs
- Basic geometry
- Calculating PSI
- Calculations using a calculator
- Computation of decimals
- Counting
- Estimation
- Fractions
- Measurement
- Metrics (conversion from standard)
- Micrometer applications
- Multiplication and division
- Percentages
- Problem solving applications
- Ratio, i.e., cost per unit/\$ for scrap, safety, product, time and materials
- Reading and applying calibrations of tools and tape measures
- Units of measurement
- Weights (scales)
- Working with number discriminations

## TECHNOLOGY IN THE WORKPLACE

### GOALS:

The **ASSEMBLER** will be able to comprehend mechanical and electrical processes and procedures, understand and apply safety procedures in the workplace, read gauges, and understand cooling and heating equipment.

### Topics:

The **ASSEMBLER** will understand:

- Basic chemical properties (compounds/agents/etc.)
- Basic electricity
- Basic scientific concepts as they relate to the company
- Basic principles of how air conditioning and heating units
- Flows and friction loss
- Interfacing with computers
- Principles of cooling and heating
- Properties of metals
- Properties of chemicals

## ENGLISH AS A SECOND LANGUAGE

### GOALS:

The **ASSEMBLER** will be able to speak, understand and write in English in order to function effectively, efficiently and safely in the workplace.

### Topics:

The **ASSEMBLER** will be able to:

- Read English
- Speak English well enough to be understood by co-workers
- Understand co-workers
- Understand work-related expressions
- Understand American expressions and idioms
- Write English

## PROBLEM SOLVING

### GOALS:

The **ASSEMBLER** will be able to state the problem, identify and test alternatives, select the best solution, implement action and evaluate results.

### Topics:

The **ASSEMBLER** will be able to:

- Accept/reject decision making
- Anticipate a problem
- Be assertive
- Deal with other people on all levels of the organization
- Decide to shut down line or call for assistance
- Discern information
- Distinguish between problem solving and decision making

- Identify faulty material or equipment
- Improve efficiency in teams
- Know when to call for parts
- Learn to use resources efficiently
- Make use of suggestion program
- Manage time and equipment priorities during the workday
- Make proper assessment of tasks
- Participate in team involvement on the line

- Resolve disagreements between co-workers
- Respond to emergencies
- Solve immediate or specific problems in voluntary teams
- Trouble shoot
- Use critical thinking necessary for job decisions

# NOTES