

DOCUMENT RESUME

ED 363 744

CE 064 983

AUTHOR Brown, Jane; Coughlin, Merle  
 TITLE The Attleboro Workplace Education Center.  
 INSTITUTION Massachusetts State Dept. of Education, Boston.  
 SPONS AGENCY Office of Vocational and Adult Education (ED),  
 Washington, DC. National Workplace Literacy  
 Program.  
 REPORT NO 17430-98-15-9/93-DOE  
 PUB DATE Sep 93  
 NOTE 92p.; For related documents, see CE 064 978-988.  
 PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.  
 DESCRIPTORS Adult Basic Education; \*Adult Literacy; \*Labor Force  
 Development; \*Literacy Education; Outcomes of  
 Education; Program Effectiveness; \*Program  
 Implementation  
 IDENTIFIERS \*Massachusetts (Attleboro); \*Workplace Literacy

ABSTRACT

The Attleboro (Massachusetts) Workplace Education Program, a partnership of four area companies and Bristol Community College, is intended to provide workers with education that will improve the quality of their lives and their work. Housed in a corporate office building in the Attleboro Industrial Park, the program offers classes in English as a Second Language, adult basic education, and secondary education 4 days per week. Companies recruited their workers through newsletters and posters, and asked them to answer noncommitment questionnaires. After testing of English and math skills, classes were set up, mostly using commercially available materials because of time constraints. Two computers were also installed for student and teacher use. The first year of the project was a qualified success in that the project was begun and attracted some students, many of whom were grateful for and learned from the classes. However, the project also faced many delays, changes, lack of cooperation from some companies, and other frustrating occurrences. A second year of the project was scheduled, with efforts being made to correct problems encountered in the first year. (The bulk of the document consists of the following attachments: example of supervisor questionnaire, noncommitment sign-up sheets, student profile, example of a customized reading test, example of a customized mathematics test, example of a student goals sheet, examples of student pre- and posttests, examples of company pretest and posttest reports, a student self-report checklist, an example of a student evaluation, an 11-item bibliography, and a list of 18 resources.) (KC)

\*\*\*\*\*  
 \* Reproductions supplied by EDRS are the best that can be made \*  
 \* from the original document. \*  
 \*\*\*\*\*

ED 363 744

**U.S. DEPARTMENT OF EDUCATION**  
Office of Educational Research and Improvement  
**EDUCATIONAL RESOURCES INFORMATION**  
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.
- 
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

## Massachusetts Board of Education

Mr. Martin S. Kaplan, Esquire, Chairperson, Newton

Mr. Thomas Chin, Newton  
Ms. Patricia A. Crutchfield, Springfield  
Ms. Marjorie Dolan, Boston  
Dr. Jerome H. Grossman, Chestnut Hill  
Mr. Frank Haydu, III, Dover  
Mr. William K. Irwin, Jr., Wilmington  
Ms. Elizabeth Kittredge, Longmeadow  
Dr. Madelaine S. Marquez, Amherst  
Mr. S. Paul Reville, Worcester  
Dr. Richard R. Rowe, Belmont  
Dr. Stacy L. Scott, Lowell  
Rev. Michael W. Walker, Brockton

### *Ex Officiis*

(Voting Privileges)

Ms. Allyson Bowen, Westminster  
Chairperson, Student Advisory Council

Dr. Piedad F. Robertson, Secretary, Executive Office of Education

(Non-Voting Privileges)

Stanley Z. Koplik, Chancellor, Higher Education Coordinating Council

Dr. Robert V. Antonucci, Commissioner and Secretary to the Board of Education

The Massachusetts Department of Education insures equal employment/educational opportunities/affirmative action regardless of race, color, creed, national origin or sex, in compliance with Title VI and Title IX, or handicap, in compliance with section 504.

Developed by:

Jane Brown and Merle Coughlin

Written by:

Jane Brown

This publication was funded in part by a grant from the United States Department of Education  
(National Workplace Literacy Program, Cycle IV) State Publication # 17430-98-15

350 Main Street, Malden, Massachusetts 02148-5023 (617) 388-3300 • TTY: N.E.T. Relay 1-800-439-2370



# The Commonwealth of Massachusetts Department of Education

350 Main Street, Malden, Massachusetts 02148-5023

(617) 388-3300  
(617) 388-3392 Fax

Robert V. Antonucci  
Commissioner

September, 1993

I am pleased to present this publication developed through our Massachusetts Workplace Education Initiative. This publication is part of a series of resources developed for and by workplace education practitioners in business, education, and labor partnerships funded through our Department's Workplace Literacy Program.

These resources are the result of our commitment to strengthening the capacity, knowledge base, and quality of the field and to provide much-needed and long-awaited information on highly-innovative and replicable practices. These resources also complement the curriculum framework of staff training and development initiatives that were successfully developed and piloted in conjunction with the field during the past fiscal year and represent an outstanding example of the Department's theme: "Working Together for Better Results."

Each of these publications was written by trainers and workshop presenters who have participated in the training of new workplace education staff. All publications provide invaluable information on important aspects of workplace education programming. All documents begin with an overview of the field or current-state-of-the-art section as it relates to the topic at hand. Then, they move into the practitioner's experience. Next, the training plan of presenters is discussed. Each publication ends with a list of resources.

We are confident that with this series of publications we have begun an exciting but challenging journey that will further support workplaces in their progression towards becoming high-performance work organizations.

Sincerely,

*Robert V. Antonucci*  
Robert V. Antonucci  
Commissioner of Education

## **ACKNOWLEDGEMENTS**

**Individuals, groups, and organizations that have helped in the development of this publication:**

**Jane Brown, Merle Coughlin, Bob Bozarjian, Johan Uvin  
Bristol County Employment and Training Consortium  
Massachusetts Workplace Education Initiative**

**WORKPLACE EDUCATION RESOURCE SERIES:**

---

Workplace Education Mentoring Pilot Project Final Report  
17419-82-150-9/93-DOE

Workplace Education Sample Evaluation Report  
17420-30-150-9/93-DOE

Workplace Education Mini-Course Pilot Project Final Report  
17421-44-150-9/93-DOE

Transforming the Training Manual into a Learning Experience  
17422-19-150-9/93-DOE

Math in the Workplace  
17423-20-150-9/93-DOE

Learning Differently in Adult Education: Development of a Learning  
Disabilities Component At Hampden Papers, Inc.  
17424-43-150-9/93-DOE

The Role of Counseling in Workplace Education:  
Educational and Career Counseling at New England Medical Center  
17425-66-150-9/93-DOE

September 15, 1993

*The Attleboro  
Workplace Education  
Program*

*The story of setting up a collaborative  
workplace education program.*

*by Jane Brown*

## INTRODUCTION

On January 19, 1993 the Attleboro Workplace Education Center had its official opening hosted by the Attleboro Chamber of Commerce. Governor Weld and the area Representative sent letters of congratulations, the Mayor of Attleboro declared the Center open, the President of Bristol Community College praised the companies' effort and representatives of the Department of Education (MA) declared their backing for collaborative partnerships such as that at AWEC. The occasion was, perhaps, best summed up by Tricia Keane, the Training Manager at Jostens which had been the first company to reach out for workplace education. "Today," she said, in a thankyou letter to BCC, " I saw my dreams come true."

What is the Attleboro Workplace Education Program? How did it begin? How did it develop? Will it be a success?

## WHAT IS THE ATTLEBORO WORKPLACE EDUCATION PROGRAM?

The Attleboro Workplace Education Program is a partnership between four companies (General Metal Finishing, Jostens, the Robbins Company and Sternleach) and Bristol Community College. Its primary goal is to provide its workforce with education which will improve the quality of their lives and the quality of their work on the floor. It is housed in a corporate office building in the Attleboro Industrial Park. English-as-a-Second-Language and Adult Basic and Secondary Education classes meet in the center from Monday to Thursday of each week.

## HOW DID IT BEGIN?

In 1991, Jostens (a branch of a Fortune 500 company which manufactures class rings in the Attleboro Industrial Park) decided that if they were to remain competitive, it was time for major changes in their manufacturing process. They planned to introduce cells, build up teamwork and work towards TQM. The workforce, used to traditional manufacturing processes, was overwhelmed. The training manager asked Bristol Community College for help. The college held classes in ESL and in ASE and Jostens noted the changes in the members of the workforce who had taken classes. The company was impressed by the increased confidence of the workers and their improved communication skills and pleased with the surge of interest in education in the plant. It was also considering more major changes in production. Its workforce was about to double; each worker's responsibilities to increase.

The training manager was company committed but also community minded and was convinced that these two beliefs were not incompatible. Jostens and BCC staff discussed



ways in which other companies might have access to the program and applied for a JTPA grant. The proposal outlined Jostens' educational needs but also stated that the company would encourage other companies in the Attleboro Industrial Park to share in the program.

It took some time for the proposal to be accepted, partly because the partners had asked for the purchase of two computers which would access NovaNET and assist with training. When approval came through in April 1992, there were only thirteen weeks left before Jostens' shutdown and total reorganization of the floor.

BCC staff met with management and with supervisors to discuss goals and curriculum. BCC asked that they bring samples of any reading, writing or math needed on the floor and that they complete some questionnaires to give us guidelines.

**\*ATTACHMENT I Ex of questionnaire for supervisors**

*[Looking back...i]*

BCC staff made 'teach the teacher' visits to the plant and built up some understanding and photographs of the work flow.

BCC staff then began recruitment.

Some suggestions for recruitment are:

1. Articles in company newsletter or newsheet.
2. Posters. Start two weeks before sign up and orientation time, change and build up interest. Best are photos and quotes from former students.
3. P/A system (skits--something like Garrison Keeler's non-fund raising for public radio if you're creative) or announcements or ex-students talking.
4. Information about proposed program on pay checks
5. Instructors become familiar figures in plant, watching jobs, asking and answering questions, finally handing out flyers etc
6. Display/Question/Answer table of books, information, video manned by a member of the educational team and former student. This is probably best set up in the cafeteria although its a good idea to have some time in a private office for questions from prospective but shy participants. Give out "non-commitment sheets" -- give people time to think it over

**\* ATTACHMENT II-Non commitment sign up sheets.**

7. Former students wear badges..."Ask me about..."
  8. Orientation/question /answer meetings
- i If the team had the opportunity to do this again, it would ask for initial meetings to include representatives from the floor as well as management and supervisors. We would form a planning and evaluation team. We think this the ideal start up. This sort of commitment however is not always possible, and, with more traditional companies, may hamper the workforce's chances of education.*

BCC has built up a generic profile sheet for ESL testing and basic math testing which we customize for each plant. If we are testing reading we like to use examples from around the plant that we have gathered from the company and assessed the reading level.

**ATTACHMENT III (ESL profile), IV (ex. of a customized reading test) and V (ex. of a customized math test.)**

While this testing was being carried out at Jostens, Jostens and BCC sent out a letter to all the other companies in the Industrial Park. We explained what we were doing, we invited them to call and ask questions and we asked them to join us. The majority of the seven companies were not interested but two - GMF and its sister company Brainin- responded immediately. Both were "traditional methods " companies but both were interested. We followed the same formula for setting up workplace education in companies as we used at Jostens; we set up classes, identified student goals and we began.

(Looking back...ii)

**ATTACHMENT VI Ex. of Student Goals Sheet. Acknowledgement and thanks to Marilyn Gillespie (see bibliography)**

ii After testing we now always try to organize one-on-one meetings between instructor and potential student. Instructor and student find this meeting invaluable. Each gets to know the other a little, if the student has fears he can be reassured and each has time to discuss goals and needed skills.

After the meeting, we think that it is necessary to allow at least three weeks to elapse before classes begin. It is true that momentum and enthusiasm has been built up and that there is some danger that this will die down. This should not happen if the plant and the prospective students are aware that a lot of preparation is taking place. This is the time when instructors are revisiting the plant and making themselves familiar with the manufacturing processes and the skills needed on the job. They are collecting further examples of the reading, writing and math necessary for the workplace and are rebuilding curriculum and the first sample of their lesson sequence plans. They are assessing commercial products available and ordering those which will be helpful so that they will be in place for their first lessons. We do not think that the numbers of excellent commercial products available should be dismissed. Ideally one would write ones own materials, use personal and meaningful photos and illustrations. When prep time is limited one thankfully remembers that imaginative and experienced instructors have written commercial products; students warm to a glossy book of their own. Commercial books, reference books and personal materials developed by teacher and students for themselves should all be part of the workplace education program.

Classes were held in the cafeteria at Jostens. We were all worried about the limited amount of time available for instructional time because of belated grant approval and the eleven weeks to summer shutdown.

Jostens organized a certain amount of publicity (refer back of page) and Jostens was right. The Personnel Administrator from the Robbins Company, not one of the companies from inside the Park but one situated some few miles away, read the newspaper report and called up. Members of the Robbins workforce joined the classes.

Belatedly--we were still drawing breath--training and personnel managers and educators formed the nucleus of our advisory board.

*(Looking back...iii)*

Classes began and--it seemed-- almost immediately had to stop for the summer shutdown, to begin again for another seven week bite before the end of the grant. Our nucleus Advisory Board talked and planned. We were enthusiastic. Ideas flew. All Attleboro companies would be involved. We'd have a collaborative Attleboro Workplace Education Program--we'd reach out further. Who could resist what we were offering? We sent out more letters to other companies signed by all the CEOs of our four. "Come to classes and see for yourselves," we said. "Talk to any of us about it--we can do great things for all our workforces. Thud. Responses varied from:

" We have really no need of Workplace Education but if you must, send us more information about it," to the more frigid: "           Company" has no interest in providing its workforce with education programs.

Classes finished, teachers and students assessed their accomplishments and completed their evaluations, supervisors made their evaluations and we filled out final reports.

**ATTACHMENTS VI-ex. of Student Pre-post, VII-ex. of company Pre-Post (no individual academic results to be given to company)**

*iii We made a mistake. We should have set up a complete Advisory Board. Our ideas were good but we were small guns. If we'd called in the Chamber of Commerce and other local organizations here, we might have made more impact. AWEC now believes that a full Advisory Board should be formed as soon as possible and should include members from companies [workers/students & management], the R.E.B., education (including representatives from D.O.E.) and outside services such as Chamber of Commerce or City Hall. The Advisory Board should elect officers and follow formal meeting procedures.*

## HOW DID IT DEVELOP?

The Advisory Board (still the training and personnel representatives from our companies and educators) applied for a grant from the JTPA 8% Education Coordination Grant and looked for another site for classes. Jostens had doubled their workforce; their cafeteria was used for meetings and training sessions. They had generously agreed to allow workers from other competing factories to enter the plant but their strict security system had made this an extra load on their security people plus intimidating some of the outside students. Then we had a break through. A sister company of one of the partnership expressed interest in joining the program. Its parent company had vacant premises in the Industrial Park which had been on sale for four years. There was a chance that we might be permitted to use it while it remained on the market.

One might have thought that AWEC'S problems were over. But they weren't. The partnership had hoped to have received information on whether or not the JTPA 8% Education Grant had been approved in September. We did not. Negotiations over the use of the building were carried out privately between G.M.F. and its sister company. No final decision came. As the year moved into October, the partnership decided that it would look optimistically at the chances of grant and building and we held our usual beginnings. Posters, meeting, flyers, display/QA tables, sign up sheets in five companies. The need and the enthusiasm was there. One company, however, did not want to allow any company time for classes; the others had agreed to release workers on half company and half personal time. This company dropped out. Another company had all its workers on maximum overtime schedules; no students could be interviewed or any class scheduled until the last weeks of January, 1993. The year moved into November. AWEC heard unofficially that the proposal was approved. Negotiations for the building continued.

Understandably, experienced instructors who had hoped to begin classes at AWEC in September could not wait in the uncertain expectation of classes and salaries. They applied for, and got, other jobs. Workers who had got excited about classes in October were starting to wonder what the fuss had all been about. Coincidentally, on November 30th 1992 AWEC received both official approval of the grant and permission to use the building for classes. With holidays and shutdowns December was not the month to begin classes. We had from the third week in January until June 30th to hold classes that could fit into all companies' time frames.

We accepted the fact that we had a group of workers that might be in any class, that the sign up sheets from all the plants kept altering and went ahead and planned a gala opening. We had the opening which everyone enjoyed and then had two nights when we tried to hold beginning classes and interviews with new sign ups and those who had not been assessed.

*(Looking back. . . iv)*

Three weeks after we started classes we took part in the MCET video on Workplace Education.

*(Looking back. . .v)*

AWEC continued to develop and the partnership grew in strength. The Advisory Board expanded to become a real Advisory Board. We benefitted from ideas from student members, the community members and honorary DOE members. We made decisions and found that some were wrong. We tried other alternatives. We found solutions We made mistakes.

*iv. We don't know how this can be overcome with a one year grant. Under a three year grant one can expect to be allowed a reasonable start up period of three or four months when instructors could be paid for a reasonable preparation period--especially for collaborative learning programs. We had hoped to have two learning cycles but factories close at the end of June and this grant finished in September, so we decided to start up at the end of January and hold one session of 22 weeks. I would not do this again. Next time we would give each plant a maximum number of students who could be entered. We would not begin classes until everyone had been assessed and had had time to talk and set goals with his probable instructor. Although there would still be a start up period where students and instructors could decide that another class best suited some students needs we would have a more structured beginning. Adults are already timid about embarking on "education" and although we believe in flexible team and individual work in classes, we think that initial classes should be highly organized and reassuringly efficient.*

*v. Don't do anything of this sort until your program is firmly established. While students enjoyed it, we frightened away several.*



We lost students who went on overtime and decided that they could not afford to lose the hour's pay, others who could not organize the transportation or child care.  
(Looking Back. . .vi)

But students, instructors and supervisors were working closely together re-evaluating and refining. And the classes had begun to work together as teams: their confidence in themselves was growing; their skills were strengthening.

We had a party at the Attleboro Workplace Center to honor all the students. One of the student speakers made a speech in which he said. " I am fifty three years old and I always intended to get more education. I left school before I graduated. I had several jobs, went into the service and then I started in maintenance in my company. The years went on. I still had the idea in the back of my mind that one day I would do it. But I was not so sure any more. And when this chance came up, I can tell you that I was nervous. I think we all were. We were all from different companies, we were different ages, we were different. I thought what am I doing? But you know one of the best things that happened? We started to help each other. We got to be a group. We asked each other for help and we give it. We started to care about how everyone was doing. Our teachers were great and our group was great. And I can't tell you this. My company's done this for me and if there's any time that I can give it back to my company - with some extra of my time, with a bit more effort - well I'll do it. And something else. I know guys who are holding back. Well I'm going to get onto them. If I can do it - they can."

#### ATTACHMENT IX & X Ex. Evaluations

#### ATTACHMENT XI Bibliography

#### WILL AWEC BE A SUCCESS?

Fiscal Year 1993 is over and we are planning FY '94. The partners in AWEC have learned some necessary lessons and have made resolutions for the new educational year. AWEC believes it will succeed. All partners are committed to ongoing education for a quality workforce and all partners believe that Attleboro itself will benefit if other companies share in this educational opportunity.

*vi. Next time with our limited numbers allowed we shall have waiting lists for the classes and each prospective student will be asked to consider his commitment before he signs up.*

## ATTACHMENT II

To Everyone at Company Name:

Would you take the time to fill out this questionnaire?

This is NOT a commitment on your part.

This is just to help your company and BCC to find out where your interests lie. Now that American companies are becoming more technological, and the work process is becoming more sophisticated, we hope that we may offer you workshops and classes to improve your skills.

Please give this back to name at the BCC table OR give it to your supervisor.

Remember — this is not a commitment. This tells us how we may best plan to help you.

Thank you.





## WHAT ARE YOU MOST INTERESTED IN?

Tell us:

Check a box or add your own interest.

I want to learn to speak/read/write more English.

I want to improve my math.

I want to improve my reading/writing.

I want to improve my reading/writing /math and prepare for my GED.

Now add any subjects that you are interested in that are not on the list.

I want to \_\_\_\_\_

Company name and BCC want to help you reach your goals. We are planning a first set of workshops and classes here in your company, and we would like to include you in them. Bristol Community College will introduce you to instructors who will work with you and materials that will best meet your needs.

Name: \_\_\_\_\_

Company: \_\_\_\_\_ Department: \_\_\_\_\_ Shift: \_\_\_\_\_

(Forgive us our mistakes. Your Portuguese is great and ours is poor.)

**Marque os que aplicam a si:**

Quero aprender a falar mais ingles.

Quero melhorar a matematica.

Quero preparas para o GED.

Escreva outros assunto que gostaria de aprender:

---

Name: \_\_\_\_\_

Company: \_\_\_\_\_ Departamento: \_\_\_\_\_ Shift: \_\_\_\_\_

# ATTACHMENT III

## Student Profile Sheet.

## Suggestions for Instructors.

The difficulty is, of course, that time tends to be limited to half an hour and sometimes strictly limited. This makes it rather stressful in the case of the more advanced students who should have ten minutes (at least) for writing and five to ten minutes for reading.

1. Keep relaxed. The first part is probably the most important so that the student is comfortable about talking with you. Change focus any time if you think that it's distressing or embarrassing. You can return or make it all impromptu and make an assessment.
2. If you need to help the student fill in his sign-up sheet, try to behave as if you fill in everybody's. (I know this is a pretty foolish suggestion.)
3. Do reading and writing when you've finished talking (although some instructors find it easiest to start with the fill-in sheet that starts off the writing section). This is at your discretion. If the student can't read or write, you may want to do a short reading aloud and ask some yes/no questions.
4. Tell students who can read to flip through and choose the passage they feel happiest with—passages are in order of difficulty .
5. Writing could be a carry-on from their telling you about their first day in or first impressions of the U.S. If they are not happy with that, fall back on "the perfect life" or describe a first or youngest daughter/son. If they say they can't write at all in English, or are faltering badly, but have told you that they can write in their own language, have them write a paragraph in their own language.
6. Reading the newspaper is more time consuming but it's useful if there's time.

Can you write any suggestions you have for improvements to/changes in this and let me have your ideas?

Thanks.

**STUDENT PROFILE SHEET/GENERIC FORM/or CUSTOMIZED FOR COMPANY NAME**

**STUDENT'S NAME:** \_\_\_\_\_ **SS#** \_\_\_\_\_ (if possible)

**DATE/PLACE TESTED:** \_\_\_\_\_ **BY:** \_\_\_\_\_

**CLASS REC.(at end of testing):** \_\_\_\_\_

**COMMENTS:**

**EDUCATIONAL BACKGROUND OF STUDENT:**

**LITERATE IN OWN LANGUAGE?**

**YES NO**

**WHY DOES HE/SHE WANT TO STUDY ENGLISH?**

**ORAL PLACEMENT SCORE LEVEL:** \_\_\_\_\_

**ATTACHED:(please check if applicable)**

**SIGN UP SHEET:** \_\_\_\_\_

**TEST LEVEL/Comments**

**WRITING TEST:** \_\_\_\_\_

**READING TEST:** \_\_\_\_\_

**GRAMMAR TEST:** \_\_\_\_\_

**SCORING:**

- 1 = didn't understand at all although repeated twice.**
- 2 = understood on 2nd repetition and answered with hesitation.**
- 3 = understood but answered hesitantly or inaccurately or ungrammatically.**
- 4 = understood—answered with confidence but non-native speaker; structures or accent difficult to understand.**
- 5 = understood and answered as if an American or native speaker.**

**Line underneath 1 2 3 4 5 is for notes on obvious problems (i.e. leaves out articles, no auxiliary verbs, no past tense—or scribble example of common error.)**

**LEVEL A 1**

**I. RELAXING—No notes—put students at ease. Notes can be made when students are looking at photos (show them one or two even if they have not completed Level A1) or at end of interview.**

| Questions   | Possible Response                              | Score/Actual Response &/or comment |   |   |   |   |
|---|--|------------------------------------|---|---|---|---|
| 1. Hello. Please sit down.<br>How are you?  | <i>Hello. Fine thanks.<br/>And you? (etc.)</i> | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |
| 2. My name is _____<br>What's your name?  | <i>It's _____</i>                              | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |
| 3. I work for Bristol Community College. You know that <u>Company Name</u> and Bristol Community College hope to start a class to help people with English. (Chat a bit here until student looks comfortable) I want to talk to you and see what you want from classes and what we can do to work together to help you) |  |                                    |   |   |   |   |
| I'm a teacher<br>What's your job?   | <i>I'm a _____<br/>I work in _____</i>         | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |
| 4. What do you do on the job?<br>OR<br>What does a _____ do?  | <i>I _____ and _____<br/>A _____ and _____</i> | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |
| 5. Do you like your job?  | <i>Yes./Yes, I do<br/>No. No, I don't</i>      | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |
| 6. Why do/don't you like it?  | <i>Because _____<br/>It's _____</i>            | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |
| 7. What time do you start work?   | <i>At _____<br/>I start at _____</i>           | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |
| 8. Who's your supervisor?   | <i>It's _____<br/>She's/He's _____</i>         | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |
| 9. Where are you from?  | <i>I'm from _____<br/>From _____</i>           | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |
| 10. How long have you been in America?  | <i>Since _____<br/>For _____</i>               | 1                                  | 2 | 3 | 4 | 5 |
|   |  | _____                              |   |   |   |   |

**STOP HERE IF STUDENT IS HAVING PROBLEMS. Chat a little reassuringly—CHANGE THE FOCUS—if possible, bring out newspaper in student's tongue—apologize that you can't speak his/her language. ASK if he/she can read it to you. ASK what it means in English (if student cannot read own language, REASSURE.) DECIDE if he/she needs help to fill in sign up sheet & if you want him to try Grammar/Reading/Writing. IF NOT, thank student, say how much you've enjoyed talking to him/her and that you hope to see him/her again soon.**

**Level A 2**

**HERE YOU COULD START TO RECORD A LITTLE IF STUDENT IS RELAXED AND CAN STILL CONTINUE. THERE NEED BE NO REAL BREAK BETWEEN THIS AND A1 EXCEPT THAT YOU COULD PICK UP A PEN.**

11. How many hours do you work every day?  
*Eight*  
*I work eight.* 1 2 3 4 5  
\_\_\_\_\_
12. Where do you live?  
*(In) \_\_\_\_\_*  
*I live in \_\_\_\_\_* 1 2 3 4 5  
\_\_\_\_\_
13. Can you drive a car? *Yes. Yes, I can.* 1 2 3 4 5  
*No. No, I can't* \_\_\_\_\_
14. (If yes) Do you drive to work? *Yes or Yes, I do* 1 2 3 4 5  
(If no) How do you come to work?  
*With my friend, by bus etc.* \_\_\_\_\_
15. How long does it take you? *It takes (me) \_\_\_\_\_* 1 2 3 4 5  
*\_\_\_\_\_ hours*  
*About \_\_\_\_\_* \_\_\_\_\_
16. Do you have to work on Saturdays?  
*Yes. / Yes, I do* 1 2 3 4 5  
*No. / No, I don't* \_\_\_\_\_  
*Sometimes* \_\_\_\_\_
17. (If no) What are you going to do this Saturday?  
*I'm going to \_\_\_\_\_* 1 2 3 4 5  
*I'll \_\_\_\_\_* \_\_\_\_\_
- (If yes) What are you going to do when you finish work?  
*I'm going to \_\_\_\_\_* \_\_\_\_\_  
*I'll \_\_\_\_\_* \_\_\_\_\_
- (If sometimes) Are you going to work this Saturday?  
(then back to if yes/if no question)

**STOP HERE IF STUDENT IS HAVING PROBLEMS. Chat a little reassuringly—CHANGE THE FOCUS—If possible, bring out newspaper in student's tongue. Apologize that you can't speak his/her language. ASK if he/she can read it to you. ASK what it means in English (if student cannot read own language, REASSURE.) DECIDE if he/she needs help to fill in sign-up sheet & if you want him to try Grammar/Reading/Writing. IF NOT, thank student, say how much you've enjoyed talking to him/her and that you hope to see him/her again soon.**

**Level B 1 (Photos attached)**

**We took some photos around some plants. I'd like to show them to you  
Most of the photos are at company name. Maybe you can tell me something about them.**

**Look at Picture 1.**

**18. This is a sign for a company here. Is it your company?**

**1 2 3 4 5**

*Yes, it is.  
No, it isn't.*

\_\_\_\_\_

**Look at Picture 2.**

**19. This is someone who works in your/this company.**

**Do you know her?**

**1 2 3 4 5**

*(No), I don't*

*I don't know her  
(Yes), I do. it's \_\_\_\_\_*

\_\_\_\_\_

**Look at Picture 3.**

**20. What's this?**

**1 2 3 4 5**

*It looks like the place you  
clock / punch in*

\_\_\_\_\_

**21. What time is it?**

*3 o'clock*

**1 2 3 4 5**

\_\_\_\_\_

**Look at Picture 4.**

**22. What's she doing now?**

**1 2 3 4 5**

*She's \_\_\_\_\_  
She's clock/punching in.*

\_\_\_\_\_

**23. Do you clock/punch in every morning?**

*Yes, I do*

**1 2 3 4 5**

*No, I don't*

\_\_\_\_\_

**Look at Picture 5.**

**24. What's she doing now?**

*He/she's \_\_\_\_\_*

*eating lunch/talking/  
taking a break etc.*

**1 2 3 4 5**

\_\_\_\_\_

**Level B2 Try to make this section more like a discussion and elicit longer answers.**

25. Most Americans call people up. They don't like to write so much. I don't write a lot of letters but I call people all the time. Chat a little about who you both call most, how you call your family, does student call home/ international costs etc.) (CAREFUL-If student is a refugee, or from politically sensitive area, don't bring in international calls.)  
Make an overall assessment. 1 2 3 4 5
- 
26. Can you make calls out from Company name? 1 2 3 4 5  
Yes you/we can  
No, you/we can't
- 
27. How do you make outside calls? 1 2 3 4 5  
You use...etc
- 
28. This photo was taken a month ago.  
What did \_\_\_\_\_ do a month ago? 1 2 3 4 5  
She made a phone call
- 
29. Did she call from home? 1 2 3 4 5  
No, she didn't
- 
30. Where did she call from? 1 2 3 4 5  
She called from....  
A pay phone
- 
31. How do you call from a pay phone? 1 2 3 4 5  
You place a dime/a quarter.....
-



**Level C 1**

**May I ask you some questions about yourself and your country?**

32. You said you came from \_\_\_\_\_.  
Why did you come? 1 2 3 4 5  
\_\_\_\_\_

33. When did you leave? 1 2 3 4 5  
\_\_\_\_\_

34. Did you come by yourself? 1 2 3 4 5  
\_\_\_\_\_

35. Were you frightened? 1 2 3 4 5  
\_\_\_\_\_

36. (Talk a bit here- I remember when I etc.)  
Can you remember the day you arrived? Tell me about it.  
(This could be the warm up for the writing topic) 1 2 3 4 5  
\_\_\_\_\_  
\_\_\_\_\_

37. Have you ever been back? (Be tactful if student  
is a refugee.) 1 2 3 4 5  
\_\_\_\_\_

38. Why? Why not? (If student is a refugee, try  
Would you like to some day? Or drop it.) 1 2 3 4 5  
\_\_\_\_\_

**Level C 2**

39. Have you always worked at \_\_\_\_\_?  
Yes, I have  
No, I haven't 1 2 3 4 5  
\_\_\_\_\_

(If yes)  
How long have you worked here?  
For \_\_\_\_\_  
Since \_\_\_\_\_ 1 2 3 4 5  
\_\_\_\_\_

(If no)  
Where did you use to work?  
At \_\_\_\_\_  
I used to work at \_\_\_\_\_ 1 2 3 4 5  
\_\_\_\_\_

Where's that?  
(directions) 1 2 3 4 5  
\_\_\_\_\_

40. If you could choose the perfect life, what would  
you choose? (could be writing sample if first  
impressions of U.S. a bit hazy) 1 2 3 4 5  
\_\_\_\_\_

**A SMALL LITERACY TEST — INSERT WHERE NECESSARY.**

**1. I bought a newspaper but I can't read any of it.  
Would you read this section for me?**

**Reads**

- 1. Readily with no embarrassment**
- 2. Moderately readily—some hesitation**
- 3. Jerkily/bothered**
- 4. Can't**

**2. What does it mean?**

- 1. No problem**
- 2. A little hesitant**
- 3. Very hesitant**

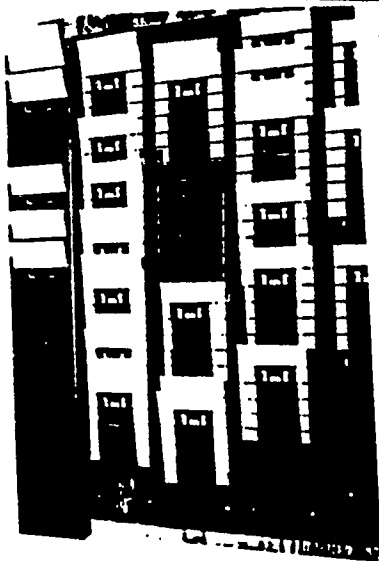
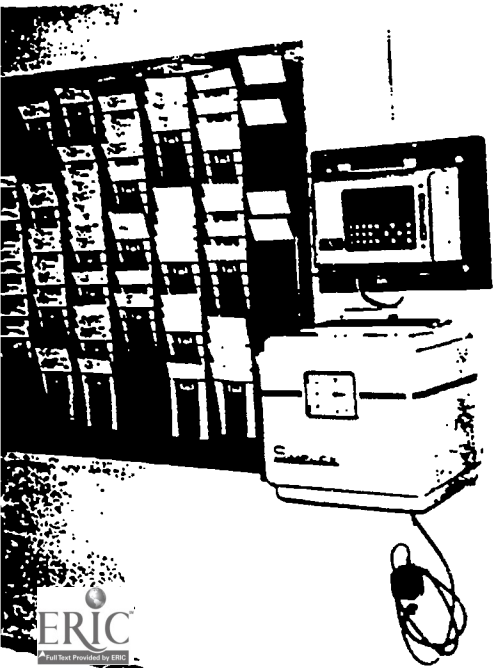
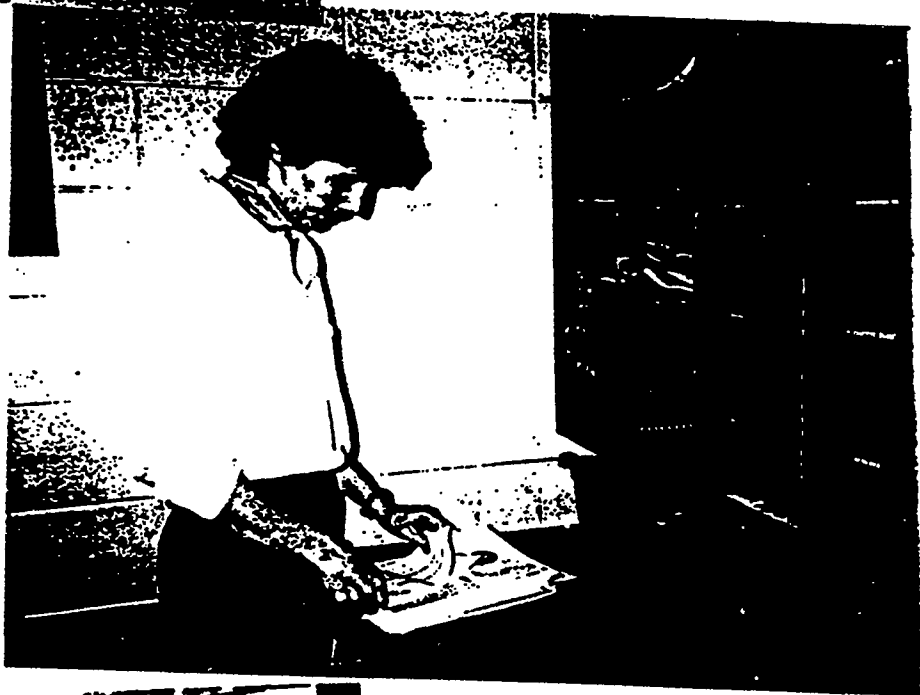
**Pictures in English.**

- 1. No Problem**
- 2. Worried by \_\_\_\_\_**
- 3. Couldn't**



①

②



③





100-170



To: All instructors testing TI Reading Assessment  
From: Jane Brown  
Re: Suggestions for TI Testing Reading Program  
Date: 2.14.93.

Attachments: 1. Copy of Reading Test  
2. Copy of ESL Test  
3. Copy of Names and Results List  
4. Copy of Schedule (Collector of tests marked with a \*)

---

1. When you arrive at your Building there will be (hopefully) someone to let you in and one group member \*) with an armful of tests.

2. I hope to also have a list of those about to be tested with the person marked \*

3. Those should be tested should arrive in groups on the 3/4 hour. Tests could last from 10 minutes to 3/4 hour so no-one will be assigned to particular teachers. Just take who's waiting each time you're finished and write names and numbers on attached list 4. Before each student comes in arrange new set of tests in grade order in folder so they don't flap about. (I hope all the sets are in order when you get them)

4. As Tiers come in, introduce yourself and chat for a minute. Establish whether or not they're interested in reading or ESL. Both will do reading test but if they're ESL candidates you will need to give them the ESL Profile test as well.

5. Make interviewees feel at ease. Tell them that you have some bits of reading for them that have been taken from places around TI. Tell them that TI is trying to help ways in which employees can be helped to improve their skills to deal with all the changes that are taking place in the company. Tell them that their scores are between BCC and themselves-- that the company will not be told them. Tell them that classes will be set up to improve skills--not immediately because it takes a little time to do this-- but in April. Tell them that you will tell them the Grade level of the passage that they have chosen and how they have done as soon as they have completed the reading. Complete prelims on student cover sheet and your list

6. Show employees that you have this folder of readings about things that happen around TI. Tell them that they should look through it--it begins with the easiest and finishes with the more difficult readings. Assure them that it's not a big deal which one they decide upon doing. They should just choose whatever seems comfortable to them.

7. Let interviewee choose a passage he/she feels comfortable with. Tell him/her to read it silently to himself and that you will then have him/her read some of it aloud. (depending on confidence you may decide on some or all)

8. When interviewee is ready, have him read some/all aloud. Make notes of difficulties (ie falters on diphthongs, long short vowels etc)

9. When you have heard as much as enables you to make an assessment, thank the interviewee and ask him/her to read it again to himself and answer the questions. \* If the interviewee has read extremely readily, it may be that he or she has underestimated himself. You could ask him/her to try the next grade level up.

10. When he/she is finished thank him/her and tell him/her how much you've enjoyed meeting him/her. Tell him/her the grade level he/she's read and if it's under fifth grade tell him/her that there's a good chance that he/she may be eligible for a reading class. Check the covering sheet if person really interested in classes. Tell him/her that these will be set up about the end of March and should start in April. Reassure again that this is to help with work at TI and is to prepare them for more sophisticated jobs--not to give them a mark on company records.

11. If the interviewee is an ESL person, ask them if you could talk to them awhile longer and administer the ESL Profile test.

12. Complete assessment, clip the test done by the student to his/her cover sheet and fill in names and results sheet before asking the next interviewee to come in.

13. At the end of the session pass your results and left over tests to the instructor marked \* on your schedule. If you are interviewing again keep extra copies.

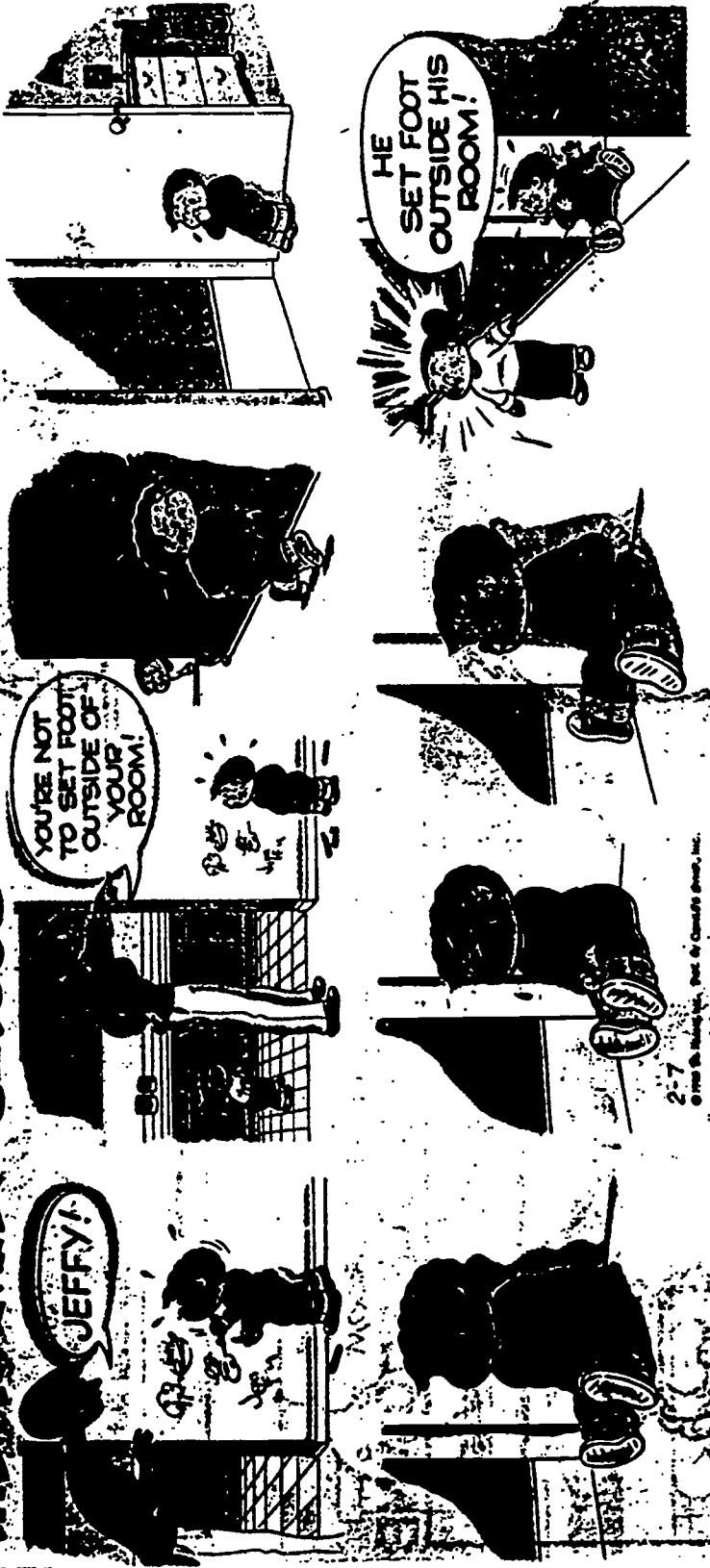


## Grade levels List

|            |   |
|------------|---|
| Can't read | Ext. 1 Comic Strip                          |
| Grade 1    | Joanne's story                              |
| Grade 2    | Quit to Learn                               |
| Grade 3    | Employees get into Stretch/break Program    |
| Grade 4    | Please don't feed the Geese                 |
| Grade 5    | Process Spec sheet                          |
| Grade 6    | Self directed groups-what do employees..... |
| Grade 7    | Coda Loans                                  |
| Grade 8    | The One Place Where You Must be Boss        |
| * Grade 12 | TI Job Posting                              |

\* There are no questions for Grade 12 which is well outside our levels. If anyone reads it ask him/her to tell you in his/her own words and then to write in own words (about 100 words) <sup>a para</sup> saying if he/she is fitted for this job. Person cld write this outside if there's a space while you interview next candidate. (Extra paper at end of black binders)

# THE FAMILY CIRCUS

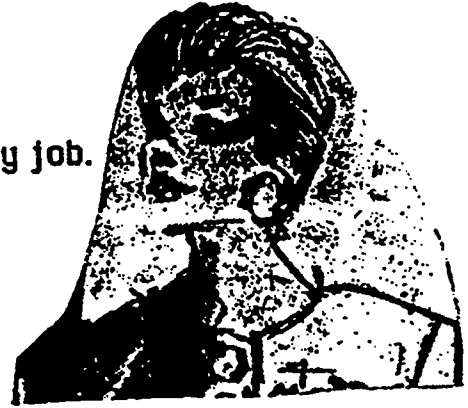


Put a circle  around the answer.

1. Is this a comic strip?      Yes      No
2. Is the boy's name Terry?      Yes      No
3. Is he happy?      Yes      No
4. Do you like comic strips?      Yes      No

## Joanne's Story

My name is Joanne. I work in Building 2 and I like my job. I did not like school but now I have three children. Their names are Tomas, Maria and Cindy. They all come home from school with their books. I want to learn to read more so I can help them. So I put my name down for reading classes.



Put a ring around T (for True) or F (for False)

EXAMPLE:

This is about Joan.

T

F

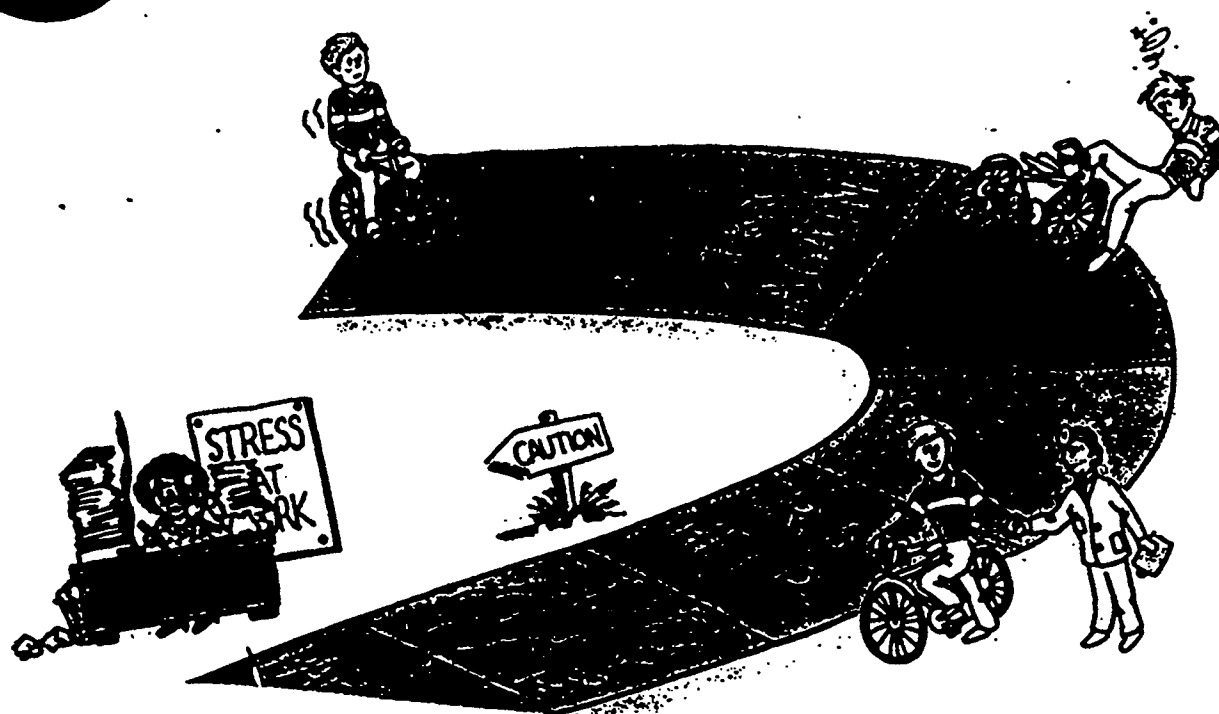
OK? Now you do it.

---

- |                                    |   |   |
|------------------------------------|---|---|
| 1. Joanne works in Building 20.    | T | F |
| 2. She likes her job.              | T | F |
| 3. She didn't go to school.        | T | F |
| 4. She has three sons.             | T | F |
| 5. She wants to help her children. | T | F |



# Quit to Win



**I** Learning to quit smoking is like learning to ride a bike. The more you practice, the more likely you are to succeed. Falling off a bike doesn't mean you won't learn to ride. Going back to smoking doesn't mean you can't quit. You may feel a little wobbly at first. You may even fall off. Most ex-smokers tried to quit at least three times before succeeding. So get back on that bike!

Put a ring round T (for True) or F (for False) for the following questions.

*Example*

Quit to win tells us how to lose weight. T **F**  
OK? Now you do it.

1. If you want to stop smoking, learn to ride a bike. T F

2. When you fall off your bike, you should give up. T F

3. The article tells you it's easy to stop smoking. T F

4. Many ex-smokers had to try to quit more than once. T F

5. *So get back on that bike!* probably means keep trying. T F

Now write a sentence about someone you know who tried to quit smoking. Start with his /her name.

---

---

---

## *Employees Get Into Stretch-Break Program.*



TI employees enjoy the stretch-break program. Why? It makes a nice break and they feel good. Employees take exercises for ten minutes twice a day.

At first people didn't want to exercise.

Now they say:

"My shoulders used to feel sore at the end of the day but now they don't."

' I love it. It makes you feel better.'

' It helps tension.'

The exercise program is to encourage health and to increase fitness.

**Now answer these questions:**

**1. How do people at TI feel about the Stretch-Break Program?**

---

**2. How often do employees take exercises?**

---

**3. Did employees want to start exercising?**

---

**4. Do you belong to the program?**

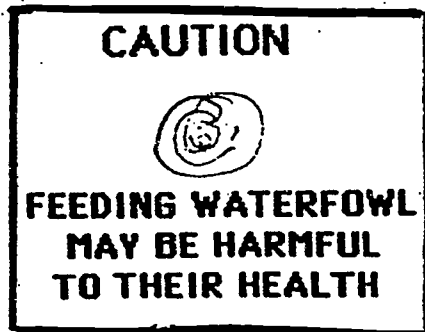
---

**5. What do you think of the idea?**

---

**PLEASE!  
DON'T FEED THE GEESE!**

The duck pond in the grounds of the TI plant in Attleboro has a sign. It says:



**Why is this?**

First there is the chance that too many birds will come to the pond if there is a food supply. When the population of wild geese becomes higher than it would normally be, there are problems. The geese will foul the grass and water and become a nuisance to Tiers. The birds too will have problems. As the water fouls and uneaten food decays, the birds can get botulism. Young geese who are fed low protein food like bread and popcorn can grow with deformed wings. If they cannot fly, the geese are defenceless against predators like cats and dogs. So please, don't feed the geese.



Please answer these questions:

1. Which waterfowl does the article name as a problem?

---

---

2. How can these birds be a nuisance ?

---

---

3. What can happen to young birds who eat a lot of popcorn?

---

---

4. Predator most probably means \_\_\_\_\_

---

5. Do you agree with this article? Why or why not? \_\_\_\_\_

---

---

PROCESS SPECIFICATION SHEET

PROCESS: CIRCUIT BREAKER ASSEMBLY

| PARTS NEEDED | PART # | QUANTITY |
|--------------|--------|----------|
| CIRCUIT BASE | 23XP   | 1        |
| METAL ARM    | 54SP   | 1        |
| 1 MM SCREW   | 23-T24 | 2        |

TOOLS AND/OR EQUIPMENT

1MM SCREWDRIVER

MAGNIFYING GLASS

QUALITY CHECKS (INSPECTION)

1. ALL CIRCUIT BREAKERS MUST HAVE SCREW HEADS FLAT AND EVEN ON SURFACE.
2. METAL ARM MUST FIT FIRMLY IN GROOVE.
3. CIRCUIT BREAKERS MUST BE FREE OF CRACKS OR OTHER VISABLE DEFECTS.

IF PIECE DOES NOT MEET QUALITY CHECKS

SCRAP

OPERATIONS

1. PLACE METAL ARM IN GROOVE OF CIRCUIT BASE SO THAT SCREW HOLES FACE UP AND MATCH SCREW HOLES IN BASE.
2. INSERT SCREWS INTO SCREW HOLES AND TIGHTEN WITH SCREWDRIVER
3. PLACE ASSEMBLED CIRCUIT BREAKER IN FINISHED TRAY

## QUESTIONS

1.) WHAT MUST THE METAL ARM BE PLACED IN ON THE CIRCUIT BASE?

2.) WHAT SHOULD BE DONE WITH THE ASSEMBLED CIRCUIT BREAKER AFTER THE SCREWS ARE TIGHTENED WITH THE SCREWDRIVER?

3.) WHAT MUST BE DONE WITH A PIECE IF A CRACK IS VISABLE?

4.) WHAT IS THE NAME OF THIS PROCESS?

5.) WHAT TOOLS/EQUIPMENT ARE USED FOR THIS PROCESS?

## Self-Managed Work Teams. What do Employees Think?

Self-Managed Work Teams are the talk of the workplace of the nineties.

These are a way of organizing work so employees work together to meet a customer's needs.

Many think that these teams are one answer to the challenge of the world market place.

But, do Attleboro employees who are on self-managed teams agree?

These employees agree on four main points.

\*The process is not easy but it is a challenge.

\*They are more involved in their work than they have been in the past.

\*They need a great deal of management support and training.

\*They would rather work this way than go back to the old work patterns.

Please answer these questions. Use full sentences if you like.

1. What is the buzz word for the work place of the nineties?

2. How do self-managed teams in Attleboro feel about old traditional methods?

Please write what you think about self management teams:

## **CODA Loans**

### ***Answers to Frequently Asked Questions***

---

#### ***Will I be charged a loan application fee?***

Yes. A \$25.00 loan application fee will be charged for each loan application sent to trust services. The fee will be deducted from the proceeds of your loan. If the loan application is withdrawn or not approved, the \$ 25.00 will be collected in a one-time payroll deduction

#### ***How will I know if my loan has been approved?***

You can check this on the PSLOAN system on IMS. Go to an IMS terminal and log onto IMS. Enter PSLOAN and choose Option 5. Option 5 is "Payment History". Enter your employee number, IMS password, and press ENTER. The screen will show all your profit sharing loans and their current status. A HOLD status means that the loan paperwork is in transit or incomplete. You will be told by Human Resources if your loan application needs more information. An APPROV ("APPROVED") status means your loan application is accepted.

If you need help, go to your loan administrator in your Human Resources office.

#### ***When will my check be ready?***

Approximately two weeks are needed to process your loan after your loan application has been received by Trust Services. An incomplete or incorrect loan application could delay loan approval.

#### ***How will I get my check?***

Your check will be mailed to your home address (the address on file with Human Resources) from Trust Services in Dallas on the Friday following approval of your loan.

Please answer these questions. Use complete sentences in your answer.

1. How much does it cost you to apply for a CODA loan? \_\_\_\_\_

---

---

2. If you don't get the loan will you still have to pay? \_\_\_\_\_

---

---

3. What sign comes onto the IMS terminal screen which assures you that your loan will granted? \_\_\_\_\_

---

---

4. What may happen if you don't fill out the application carefully? \_\_\_\_\_

---

---

5. How do you receive the money for the loan? \_\_\_\_\_

---

---



### ***The One Place Where You Must Be The Boss***

Transporting children is a serious business. The leading cause of death for children in this country is traffic crashes. So, the family car is an important place for exercising discipline. Keep these three points in mind: *face the child in the correct direction; secure the child in the safety seat; and properly secure the safety seat in position as recommended by your car's manufacturer.*

Infant seats face backward with baby in a semi-reclining position. Toddler and booster seats face forward. Always fasten the harness *snugly* and *completely*. Anchoring the child-safety seat properly is critical to the seat's performance in a crash, so make sure it fits in your car. Read your owner's manual and follow the safety-seat manufacturer's instructions carefully. If you're still unsure, get expert advice.

1. Why should you be very careful about putting a child in a safety seat?

---

2. What should you read before you start putting a safety seat into your car?

---

3. If you put a four year old in a safety seat which way should he face?

---

4. Should a baby be seated upright?

---

5. Where would you go for 'expert advice'?

---



\* JOS BEST QUALIFIED \*

SUPERINTENDENT'S POSTING  
ALL MANUFACTURING COST CENTERS

POSTING DATE: 10/22/92

REMOVAL DATE: 10/27/92

EFFECTIVE AS OF 10/28/92, THE FOLLOWING PERMANENT POSITION WILL BE AVAILABLE

JOB TITLE:            PRODUCTION OPERATOR - SELF MANAGED WORK GROUP  
GRADE/CODE:        4/5                    3140  
CC/SHIFT:            .295    PSM                    2 OPENINGS ON 2ND SHIFT  
HOURS OF WORK:    15:30 - 24:00                (OVERTIME AS REQUIRED)

**DUTIES TO BE PERFORMED:** BE A MEMBER OF A SELF MANAGED WORK GROUP WHICH DETERMINES WHAT IS REQUIRED TO MEET PRODUCTION GOALS. FOR EXAMPLE, TEAM WILL DECIDE NUMBER OF PEOPLE NEEDED, OVERTIME REQUIREMENTS, AND SUPPORT REQUIRED FROM MAINTENANCE, ENGINEERING, AND QUALITY. EACH MEMBER WILL BE THE LEADER OF THE GROUP ON A ROTATING BASIS. THE LEADER WILL BE RESPONSIBLE FOR UPDATING THE STATUS ON THRUPUTS, YIELDS, ATTENDANCE, PERFORMANCE, ETC. THE LEADER WILL ALSO HANDLE ALL COORDINATION WITH ENGINEERING/PRODUCTION CONTROL/QUALITY/MAINTENANCE.

MUST OPERATE AND MAINTAIN ALL THE EQUIPMENT IN THE PRODUCTION LINE (EXCEPT AMI MACHINE), PERFORM STATISTICAL PROCESS CONTROL CHECKS AND PREVENTATIVE MAINTENANCE. MUST BE ABLE TO READ AND INTERPRET DRAWINGS AND MAKE DIAGNOSTIC EVALUATION OF MACHINE AND PRODUCT RELATED PROBLEMS.

**QUALIFICATIONS REQUIRED:** MUST BE A SELF MOTIVATED INDIVIDUAL WITH A POSITIVE ATTITUDE THAT CAN WORK IN A TEAM ENVIRONMENT. MUST BE ABLE TO EFFECTIVELY COMMUNICATE WITH THE GROUP. MUST BE ABLE TO READ AND FOLLOW PROCESS SPECIFICATIONS, USE VARIOUS MEASURING INSTRUMENTS, AND MAKE MATHEMATICAL COMPUTATIONS. MUST HAVE AN EXCELLENT ATTENDANCE AND PERFORMANCE HISTORY.

IF INTERESTED, CONTACT VICTOR JENKINS / DONNA PEREIRA AND YOUR NAME, COST CENTER, SHIFT, AND SERVICE DATE WILL BE PLACED ON THE DEPARTMENTAL BID LIST.

DECISION WILL BE MADE AFTER JOB HAS BEEN POSTED FOR THREE (3) DAYS.

A TIER MUST BE IN THE SUPERINTENDENT'S RESPONSIBILITY AND CURRENT JOB CLASSIFICATION FOR 6 MONTHS BEFORE BEING ELIGIBLE TO BID. TIME LIMITATIONS MAY BE WAIVED IF THE CHANGE WOULD SERVE THE MUTUAL GOALS OF THE TIER AND TI.

# ATTACHMENT V

University of Massachusetts, Dartmouth

1.

&

Aerovox, Inc.

Technical Skills Training Program

Programa de Ensino

Name: \_\_\_\_\_

Department: \_\_\_\_\_

Number: \_\_\_\_\_

Shift: \_\_\_\_\_

Date: \_\_\_\_\_

*Do not be worried by these questions. If you make mistakes it does not matter. Aerovox is planning to train all employees to understand new methods and Statistical Process Control. This quiz is just to help us decide if there are ways that we can help you to deal with any new methods.*

*Não se preocuparem com estas perguntas. Se fizerem erros não faz mal. O Aerovox está planeando em ensinar a todos as empregados a compreenderem o novo sistema e control de processo estatístico. Este questionário é para ajudar-vos a melhor compreenderem este sistema.*

---

*1. Read these examples:*

*Leiam os seguintes exemplos:*

*(a) Write 204 in Portuguese.*

*Escreva 204 em português.*

*Answer / Resposta = duzentos e quatro*

*(b) Write this number the American way.*

*Escreva o número a maneira American*

*5.609*

*Answer / Resposta = 5,609*

Now do this:

2.

Agora responda às seguintes perguntas:

(a) Write 574 in Portuguese.

Escreva 574 em português.

Answer/ Resposta = \_\_\_\_\_

(b) Write this in the American way.

Escreva à maneira American.

6.202.402

Answer/ Resposta = \_\_\_\_\_

(c) Read this example.

Leiam o exemplo.

*In America we do this:  
Na America fazemos a  
divisão assim:*

$$\begin{array}{r} 2 \\ 5 \overline{) 10} \\ \underline{-10} \\ 0 \end{array}$$

*In Portugal we do this:  
Em Portugal fazemos a divisão  
assim:*

$$\begin{array}{r} 10 \overline{) 5} \\ 0 \quad 2 \end{array}$$

(c) Now do this which ever way you want

Faca estes problemas da maneira que preferir

$$7 \overline{) 49}$$

$$49 \overline{) 7}$$

Remember these examples as you do the rest of the quiz. The questions will be written the AMERICAN way. A period is a decimal point. Use a scrap sheet to work out the answer any way you want. It doesn't matter which way you do it.

Lembrarem-se destes exemplos para quando fizerem o resto do questionário. O ponto (.) em português significa 'o decimo'. Use papel branco para resolver os problemas da maneira que queira. Não interessa que sistema use.

3.

$$\begin{array}{r} 2 \text{ (a)} \quad 452 \\ +165 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \text{ (b)} \quad 4,801 \\ +1,609 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \text{ (a)} \quad .92 \\ +.46 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \text{ (b)} \quad 19.07 \\ +12.5 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \text{ (a)} \quad 382 \\ -51 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \text{ (b)} \quad 806 \\ -454 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \text{ (a)} \quad .54 \\ -.08 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \text{ (b)} \quad 72.6 \\ -1.02 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \text{ (a)} \quad 28 \\ \times 21 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \text{ (b)} \quad 407 \\ \times 53 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \text{ (a)} \quad .3 \\ \times .3 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \text{ (b)} \quad 38.6 \\ \times 4.02 \\ \hline \end{array}$$

$$8 \text{ (a)} \quad 3 \overline{) 144}$$

$$8 \text{ (b)} \quad 400 \overline{) 16,000}$$

$$9 \text{ (a)} \quad 3 \overline{) 15.6}$$

$$9 \text{ (b)} \quad .04 \overline{) .116}$$

10. Change these fractions to decimals

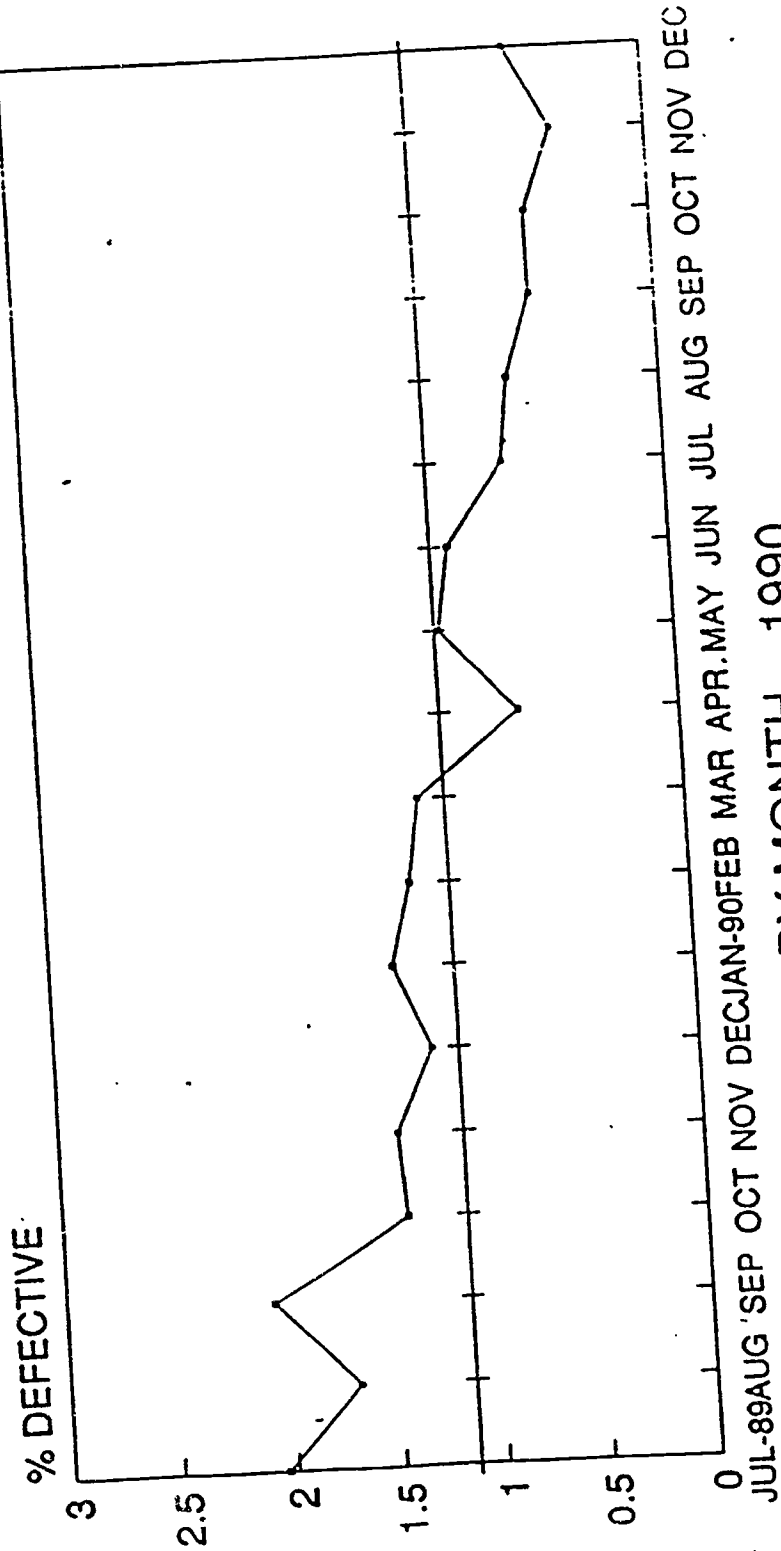
Mude para decimos as seguintes fracções.

$$(a) \quad \frac{3}{4} = \underline{\hspace{2cm}}$$

$$(b) \quad \frac{7}{10} = \underline{\hspace{2cm}}$$

# MPP Capacitors/Assy

## Percent Defective Units/Final Test



—●— MONTHLY %    —+— 1990 GOAL (1.14%)



11. This is a line graph that shows the monthly percent of defective units at Final Test of MPP Capacitors. This actual monthly percent is compared to a goal that has been set for each month.

Este gráfico é um gráfico linear que mostra a percentagem mensal das unidades rejeitadas no Final Test das capacidades do MPP. Esta percentagem é comparada com a quantia atingida para cada mês.

(a) What is the goal for the percent of defective units for 1990?

Approximately what is the percent of defective units for the month of January?

Qual é a percentagem atingida em 1990 para as unidades rejeitadas?

Aproximadamente qual é a percentagem das unidades rejeitadas para o mes de Janeiro?

- (i) .56 % (ii) 1.14 %  
 (iii) 2% (iv) .5 %

- (i) 1 % (ii) .5%  
 (iii) 1.5 % (iv) .8%

# Aerovox INC.

Shift: 1 \_\_\_\_\_  
2 \_\_\_\_\_

New Bedford Division

|                         |           |                            |  |
|-------------------------|-----------|----------------------------|--|
| OPERATOR                | DATE      | OPERATION / CHARACTERISTIC | PART NAME  |
|                         |           | Solder Flow                | Section/Tab Assy   |
| SAMPLE SIZE / FREQUENCY | SACH. NO. | CONTROL                    | ES <input type="checkbox"/><br>NO <input type="checkbox"/> |
| Setup / 1 pc. hourly    |           | Tab Strength               |  |

(9.2) UCLx  
 (7.8) CLx  
 (6.4) LSL  
 (6) INDIVIDUAL (x)

|   | Tab #1 | Tab #2 | Tab #3 |
|---|--------|--------|--------|
| 9 |        |        |        |
| 8 |        |        |        |
| 7 |        |        |        |
| 6 |        |        |        |
| 5 |        |        |        |
| 4 |        |        |        |
| 3 |        |        |        |
| 2 |        |        |        |
| 1 |        |        |        |
| 0 |        |        |        |

**ACTION ON SPECIAL CAUSES**

ANY POINT OUTSIDE OF THE CONTROL LIMITS

A RUN OF 7 POINTS ALL ABOVE OR ALL BELOW THE CENTRAL LINE

ANY OTHER OBVIOUSLY NON-RANDOM PATTERN

**ACTION INSTRUCTIONS**

MOVING RANGE (MR) CHART  
 (2.2) UCL  
 MR  
 (1.0)

|     | Tab #1 | Tab #2 | Tab #3 |
|-----|--------|--------|--------|
| 3.5 |        |        |        |
| 3.0 |        |        |        |
| 2.5 |        |        |        |
| 2.0 |        |        |        |
| 1.5 |        |        |        |
| 1.0 |        |        |        |
| 0.5 |        |        |        |
| 0   |        |        |        |

| SUB-GROUP SIZE | 2    | 3    | 4    |
|----------------|------|------|------|
| 2              | 1.10 | 1.15 | 1.17 |
| 3              | 1.12 | 1.15 | 1.17 |
| 4              | 1.13 | 1.15 | 1.17 |
| 5              | 1.14 | 1.15 | 1.17 |
| 6              | 1.15 | 1.15 | 1.17 |
| 7              | 1.16 | 1.15 | 1.17 |
| 8              | 1.17 | 1.15 | 1.17 |
| 9              | 1.18 | 1.15 | 1.17 |
| 10             | 1.19 | 1.15 | 1.17 |

|         |  |  |  |
|---------|--|--|--|
| TIME    |  |  |  |
| Ind. X  |  |  |  |
| MR      |  |  |  |
| Comment |  |  |  |

THE PAGES MUST BE IN CONTROL BEFORE CAPABILITY CAN BE DETERMINED

Tab #1      Tab #2      57 Tab #3

7.

← ←  
12. If you don't know how to do this, leave it and go on to the next question.

Se não souber responder a esta pergunta deixe-a e responda seguinte pergunta.

Directions: Below are sample testings taken at the Pull Test Gage after the tabs have been soldered onto the section. Record the sample readings on the SPC chart for Tab Solder and plot the points on the graph.

Direcção: em baixo estão leituras tiradas de amostras do "Pull Test Gage" depois dos "tabs" terem sido soldados a unidade. Ponha a leitura das amostras no SPC quadro para o "Tab solder" e ponha os pontos no gráfico.

| TAB 1 | TAB 2 | TAB 3 |
|-------|-------|-------|
| 7.2   | 7.4   | 7.6   |
| 7.0   | 6.9   | 6.8   |
| 7.4   | 7.2   | 7.2   |
| 8.0   | 7.8   | 7.6   |

13. What is the average of these five numbers?

Qual é a média destes cinco números?

25, 40, 35, 20, 45

OR

25  
40  
35  
20  
45



## ATTACHMENT VI

Maria came to the U.S. from Portugal when she was ten. She came with her mother and father and her three brothers and sisters. In Portugal the whole family worked in the fields. They wanted a better life in America.

When Maria went to school in the U.S. she did not get put into a class with kids her own age. Instead she was put in with the babies. She learned to speak English fast, but she had missed out on years of school. Her math, reading and writing never caught up with that of her friends. She started to feel it was no use trying any more.

So when she was 16, she left school and started work in a factory. At eighteen she met Nick. They got married and now they have two little girls. Nick and Maria want a lot for their kids. They both work hard, they have a large, sunny apartment, and their little girls are happy and loved.

But Maria and Nick want more. They like their apartment but it's not theirs. They want their kids to grow up right and Maria is not comfortable with the day care. When she gets home, she makes supper and by the time she gets the kids to bed she is too tired to do anything except to collapse in a chair and watch a little TV. By ten o'clock she is in bed.

Maria loves her family but sometimes she feels that there must be more to life than this. She decides that she will do something for herself and her family.

# GOALS LIST

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Here are some goals that other students in the program have come up with.

## I. PERSONAL/FAMILY

Read these personal goals through, cross out those you think are not important to you and choose the five you think are really important. Number these 1-5. 1 will be the most important, 5 will be the least important of the five. You will probably have some left over.

- \_\_\_\_\_ Read more about children and family issues ( ex. Discipline, TV habits)
  - \_\_\_\_\_ Read to your children/grandchildren
  - \_\_\_\_\_ Read / write notes to/from school
  - \_\_\_\_\_ Take part in school related meetings and events(ex. meet with teachers)
  - \_\_\_\_\_ Help children with their homework
  - \_\_\_\_\_ Read labels / instructions( ex.on medicine)
  - \_\_\_\_\_ Read /discuss renting/buying a house/apartment/condo
  - \_\_\_\_\_ Read /discuss renting/buying a car/bike
  - \_\_\_\_\_ Read/discuss insurance (life, medical/house/fire etc)
  - \_\_\_\_\_ Use a phone book
  - \_\_\_\_\_ Read maps
  - \_\_\_\_\_ Read information related to health/discuss visits to dr./hospital
  - \_\_\_\_\_ Fill out forms( ex. change of address, taxes, medical)
  - \_\_\_\_\_ Read the newspaper(which sections?)
  - \_\_\_\_\_ Use a dictionary
  - \_\_\_\_\_ Improve handwriting
- Any other suggestions? \_\_\_\_\_
- \_\_\_\_\_

## II WORK

Read these work goals through, cross out those you think are not important to you and choose the five you think are really important. Number these 1-5. 1 will be the most important, 5 will be the least important of the five. You will probably have some left over.

- \_\_\_\_\_ Fill out a job application
- \_\_\_\_\_ Use reading to find out about jobs or open a business
- \_\_\_\_\_ Read or write work reports, logs, announcements
- \_\_\_\_\_ Fill out order forms / lists
- \_\_\_\_\_ Participate in work - related meeting; take notes
- \_\_\_\_\_ Read and interpret quality control tools (ex. checksheets, graphs, charts)
- \_\_\_\_\_ Read and understand company statements in newspapers, reports etc
- \_\_\_\_\_ Read and interpret basic health , stress avoidance and safety procedures on the job
- \_\_\_\_\_ Read and interpret basic instructions and labels in operating equipment /using supplies
- \_\_\_\_\_ Read and interpret information from written materials ( ex .contracts personnel policies, MPis)

Any other suggestions? \_\_\_\_\_

\_\_\_\_\_

### III COMMUNITY /COUNTRY/WORLD AFFAIRS

Read these Community goals through, cross out those you think are not important to you and choose the five you think are really important. Number these 1-5. 1 will be the most important, 5 will be the least important of the five. You will probably have some left over.

- \_\_\_\_\_ Register to vote
- \_\_\_\_\_ Apply for citizenship
- \_\_\_\_\_ Read leases/contracts
- \_\_\_\_\_ Apply for a library card
- \_\_\_\_\_ Take a driver's test
- \_\_\_\_\_ Participate in community meetings/ clubs/religious meetings
- \_\_\_\_\_ Join a group to work on a problem
- \_\_\_\_\_ Learn more about drug problems and treatment
- \_\_\_\_\_ Learn more about unemployment
- \_\_\_\_\_ Learn about resources in the community
- \_\_\_\_\_ Learn about classes and clubs in the community
- \_\_\_\_\_ Learn about the system of government in the U.S /local and national
- \_\_\_\_\_ Learn about the geography of the U.S.
- \_\_\_\_\_ Learn more about international affairs

Any other suggestions? \_\_\_\_\_

\_\_\_\_\_

## IV MATHEMATICS

In this section put an X in the column that tells how you feel about each skill.

| Already know how | Want to know right away | Want to know some-time | Don't care about this |
|------------------|-------------------------|------------------------|-----------------------|
|------------------|-------------------------|------------------------|-----------------------|

Find amount of savings with sales prices

Find unit prices to get the best buy

Figure total cost of buying on an installment plan

Find interest on saved or borrowed money

Make a budget

Set saving goals

Balance a checkbook

Understand property tax

Read a ruler

Measure fabric

Figure amount of materials to buy for home improvement

Increase or decrease a recipe

Save energy

Find car mileage

Use a map

Find weekly pay

Find net pay after deductions

Read a pay check stub

Find gross pay including overtime

Total hours on a time card

Use nutritional information given on labels

Find total calories

Compute cost of generic and brandname medicines

Prepare an income tax return

| <b>Already<br/>know<br/>how</b> | <b>Want to<br/>know<br/>right<br/>away</b> | <b>Want to<br/>know<br/>some-<br/>time</b> | <b>Don't<br/>care<br/>about this</b> |
|---------------------------------|--|--|--------------------------------------|
|---------------------------------|--|--|--------------------------------------|

---

**Perform computations of addition, subtraction, multiplication and division, including multiple operations, using whole numbers**

---

**Perform computations of addition, subtraction, multiplication and division using common or mixed fractions**

---

**Perform computations of addition, subtraction, multiplication and division, including multiple operations using decimal fractions and/or percentages eg counting money, calculating sales tax, figuring discounts**

---

**Compute averages using whole numbers, fractions, decimals or percentages**

---

**Determine approximations by estimating, rounding off numbers, and judging the correctness of the response**

---

**Interpret ratio and proportion, eg preparing mixtures, figuring pay rate**

---

**Interpret data from graphs eg line, bar, picture and circle graphs**

---

**Read and interpret basic measurement and numerical readings on measurement instruments eg ruler, scale, micrometer, gauge, scope, including identifying fractions in progressive sizes**

---

# THE Attleboro Workplace Education Center

**Brainin, General Metal Finishing, Jostens,  
Robbins, SternLeach**

**&**

**Bristol Community College**

**Name:** \_\_\_\_\_

**Company:** \_\_\_\_\_

**Number:** \_\_\_\_\_

**Shift:** \_\_\_\_\_

**Years with this  
company?**

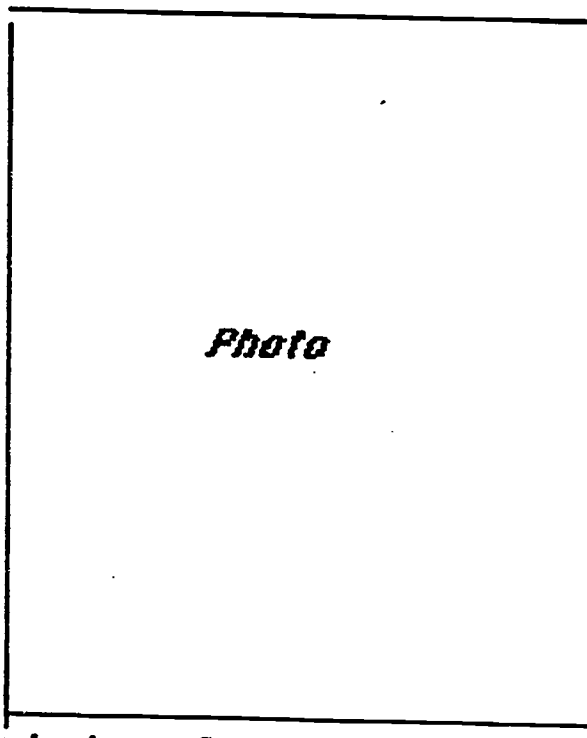
*Please circle*

0-5

6-10

11-15

16 +



| <b>Pres/prog</b> | <b>Name</b> | <b>Dates</b> | <b>Instructor</b> | <b>Recommendation</b> |
|------------------|-------------|--------------|-------------------|-----------------------|
| 1st Class        | _____       | _____        | _____             | _____                 |
| 2nd Class        | _____       | _____        | _____             | _____                 |
| 3rd Class        | _____       | _____        | _____             | _____                 |
| 4th Class        | _____       | _____        | _____             | _____                 |

Date: \_\_\_\_\_ Interviewer: \_\_\_\_\_

1. Name: \_\_\_\_\_  
(Last) (First) (middle initial)

2. Address: \_\_\_\_\_  
(#) (Street) (City) (zip)

3. Telephone Number: (\_\_\_\_\_) \_\_\_\_\_  
(area code)

4. Date of birth: \_\_\_\_ \_\_\_\_ \_\_\_\_ 5. Country of Origin: \_\_\_\_\_  
(month, day, year)

6. Social Security Number: \_\_\_\_\_

7. Gender: M / F

8. Marital Status: M / S / D / W  
(married, single, divorced, widowed)

9. Are you a Single Head of Household? YES NO

10. Do you describe yourself as:

(Please check)

\_\_\_ White \_\_\_ Black  
\_\_\_ Asian / Pacific Islander

\_\_\_ Hispanic  
\_\_\_ American Indian / Alaskan

11. Native language:  
\_\_\_ English \_\_\_ Portuguese  
\_\_\_ Spanish Other: \_\_\_\_\_

12. Other languages spoken:  
\_\_\_\_\_

13. Language(s) used (at home:) \_\_\_\_\_ (at work:) \_\_\_\_\_

14. Year of Arrival in US: \_\_\_\_\_

15. Occupation (in country of origin: ) \_\_\_\_\_ (in US) \_\_\_\_\_

16. Education in country of origin: (from age \_\_\_\_\_ to \_\_\_\_\_)  
Last Class completed \_\_\_\_\_

17. Education in US: What \_\_\_\_\_  
When \_\_\_\_\_ How long \_\_\_\_\_

18. Why do you want to join the Education Program? \_\_\_\_\_





| A. COMMUNICATION & READING (contd)  | NAA | LBC | Fully | Imp. | G.I | Fully |
|---|-----|-----|-------|------|-----|-------|
| 7. Pay and Benefits/<br>understanding pay stubs/deductions<br>W2 forms/benefits/taxes |     | ✓   |       |      | ✓   |       |
| 8. Safety at Work<br>safety rules/manual/reporting<br>accidents                       |     | ✓   |       |      | ✓   |       |
| 9. Yocab Build Up/<br>workplace/survival  |     | ✓   |       |      | ✓   |       |

| B. READING & WRITING   | NAA | LBC | Fully | Imp. | G.I | Fully |
|--|-----|-----|-------|------|-----|-------|
| 10. Can write answers in reference to<br>topics mentioned in Section I         |     | ✓   |       |      | ✓   |       |
| 11. Can fill out forms (work<br>personal,)                                     |     | ✓   |       |      | ✓   |       |
| 12. Can answer comprehension<br>questions about reading matter                 |     | ✓   |       |      | ✓   |       |
| *13. Can locate facts and information in<br>a simple article/passage           |     | ✓   |       |      | ✓   |       |
| *14. Can locate the main idea in a simple<br>paragraph                         |     | ✓   |       |      | ✓   |       |
| 15. Can write a complete sentence<br>(subject verb object)                     |     | ✓   |       |      | ✓   |       |
| 16. Can write short messages/notes<br>letters for job and personal matters N/A |     |     |       |      |     |       |
| *17. Can write a coherent passage<br>using simple grammatical sentences        |     | ✓   |       |      | ✓   |       |

\* asterisked sections refer to intermediate group only

| C. GRAMMAR   | NAA | LBC | Fully | Imp. | G.I | Fully |
|--|-----|-----|-------|------|-----|-------|
| 18. Recognizes/uses pronouns-<br>subjective, objective, possessive   |     | ✓   |       |      | ✓   |       |
| 19. Can recognize nouns<br>-singular, plural.  |     | ✓   |       |      | ✓   |       |
| 20. Recognizes/uses adjectives   |     | ✓   |       | ✓    |     |       |
| 21. Recognizes/uses adverbs  |     | ✓   |       | ✓    |     |       |
| 22. Recognizes/uses prepositional<br>phrases   |     | ✓   |       | ✓    |     |       |
| 23. Recognizes/uses noun/verb<br>agreement   |     | ✓   |       |      | ✓   |       |
| 24. Recognizes and uses verb 'to be'<br>present and past   |     | ✓   |       | ✓    |     |       |
| 25. Recognizes /uses irregular<br>verbs present and past   |     | ✓   |       | ✓    |     |       |
| 26. Recognizes/uses/understands<br>verb tense<br>- simple present<br>- continuous present<br>- simple past<br>- past continuous<br>*- perfect<br>*- future |     | ✓   |       | ✓    |     |       |
| 27. Recognizes/uses/understands<br>contractions  |     | ✓   |       | ✓    |     |       |
| 28. Recognizes/uses homonyms/<br>synonyms/antonyms   | N/A |     |       |      |     |       |
| 29. Uses punctuation   |     | ✓   |       | ✓    |     |       |
| 30. Uses capitalization  |     | ✓   |       |      | ✓   |       |

\* asterisked sections refer to intermediate group only

**D. SUGGESTIONS FOR ON-GOING LEARNING/OTHER COMMENTS/IDEAS**

---

---

---

---

---

---

---

---

---

---

# ATTACHMENT V111

BRISTOL COMMUNITY COLLEGE AND JOHNSON AND JOHNSON

English as a Second Language

Dates:

Beginning: \_\_\_\_\_

NUMBER IN CLASS: \_\_\_\_\_

Ending: \_\_\_\_\_

DEPARTMENTS: \_\_\_\_\_

Instructor: CARMEN BOTELHO

Comments: Pre Test

Beginning

End

Understands

Poss. Score: \_\_\_\_\_

Poss. Score: \_\_\_\_\_

NAA = Not at all

IEC = Little but confused

Fully See below

Average total \_\_\_\_\_

Av. total \_\_\_\_\_

Comments: Post Test

Imp = Improved

G.I. = Greatly Improved

Fully = Fully Understands *ie Brings the same capabilities/skills as average native born American though with some hesitations with language.*

**A. COMMUNICATION & READING**      NAA    IEC    Fully    Imp    GI    Fully

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| 1. Personal Information<br><i>introductions/address/age etc</i>  |  |  |  |  |  |  |
| 2. Health Issues<br><i>visiting doctor<br/>/appointments/policies</i>  |  |  |  |  |  |  |
| 3. Housing Issues<br><i>renting/buying/selling/<br/>contracts/leases etc<br/>responsibilities landlord/tenant</i>    |  |  |  |  |  |  |
| 4. Consumer Information<br><i>buying/selling/warranties/car<br/>/house appliances/return policies</i>                |  |  |  |  |  |  |
| 5. Occupational skills<br><i>common occupations/necessary<br/>skills/qualifications/</i>                             |  |  |  |  |  |  |
| 6. Pay and Benefits/<br><i>understanding pay stubs/<br/>asking for clarification/questioning<br/>benefits/taxes/</i> |  |  |  |  |  |  |
| 7. Reading/understanding job<br><i>openings posted/necessary skills/<br/>qualifications</i>                          |  |  |  |  |  |  |
| 8. Understanding company procedures<br><i>/issues/participating in meetings</i>                                      |  |  |  |  |  |  |
| 9. Giving and understanding<br><i>directions</i>   |  |  |  |  |  |  |

|   | NAA | IEC | Fully | Imp. | GI | Fully |
|---|-----|-----|-------|------|----|-------|
| 10. Safety /work related /safety manuel                   |     |     |       |      |    |       |
| 11. Community Issues/ school meetings                     |     |     |       |      |    |       |
| 12. Government/Federal-Local/ Understanding the system    |     |     |       |      |    |       |
| 13. Citizenship/ elections/what's involved in citizenship |     |     |       |      |    |       |
| 14. Vocabulary Buildup -Workplace vocab -sundmab          |     |     |       |      |    |       |

### B. READING & WRITING

|   | NAA | IEC | Fully | Imp. | GI | Fully |
|---|-----|-----|-------|------|----|-------|
| 15. Writing answers in reference to topics mentioned in Section A |     |     |       |      |    |       |
| 16 Filling out forms work/personal/community                      |     |     |       |      |    |       |
| 17. Writing Messages notes/letters/job and personal               |     |     |       |      |    |       |
| 18. Writing complete sentences /practicing complete grammar usage |     |     |       |      |    |       |

### C. GRAMMAR

|  | NAA | IEC | Fully | Imp. | GI | Fully |
|--|-----|-----|-------|------|----|-------|
| 19. Recognizes/uses pronouns-subjective, objective, possessive |     |     |       |      |    |       |
| 20. Can recognize nouns -singular, plural.                     |     |     |       |      |    |       |
| 21. Understands/practices noun/verb agreement                  |     |     |       |      |    |       |
| 22. Recognizes/uses adjectives                                 |     |     |       |      |    |       |
| 23. Recognizes/uses adverbs                                    |     |     |       |      |    |       |
| 24. Recognizes/uses prepositional phrases                      |     |     |       |      |    |       |
| 25. Recognizes and uses verb 'to be' present and past          |     |     |       |      |    |       |
| 26. Recognizes /uses irregular verbs present and past          |     |     |       |      |    |       |

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
| 27. Recognizes /uses irr. verbs as past participles.   |  |  |  |  |  |  |
| 28. Recognizes/uses/understands verb tense<br>- simple present<br>- continuous present<br>- simple past<br>- past continuous |  |  |  |  |  |  |
| 29. Recognizes/uses/understands contractions   |  |  |  |  |  |  |
| 30. Recognizes/uses some idioms  |  |  |  |  |  |  |
| 31. Recognizes uses some homonyms  |  |  |  |  |  |  |

**D. SUGGESTIONS FOR ON-GOING LEARNING/OTHER COMMENTS/IDEAS**

---



---



---



---



---



---



---



---

# ATTACHMENT IX

## BRISTOL COMMUNITY COLLEGE & COMPANY

### English as a Second Language Program

199\_

#### Education Program Participants Self Report Checklist

CLASS: \_\_\_\_\_

TIMES: \_\_\_\_\_

CYCLE BEGINNING: \_\_\_\_\_

CYCLE ENDING: \_\_\_\_\_

**THIS SURVEY IS ANONYMOUS.  
DO NOT WRITE YOUR NAME ANYWHERE.  
THINK ABOUT EACH QUESTION AND ANSWER WHAT YOU  
TRULY THINK.**



Do you think that being part of the workplace education program has changed the following for you?

Please circle *stayed the same* OR *improved* OR *improved a lot*

**I. Foundation—knowing how to learn**

I like to learn.

*stayed the same* *improved* *improved a lot*

I'm not afraid to ask questions about something I don't know.

*stayed the same* *improved* *improved a lot*

I know where to go for information to answer my questions (to a library, to a person).

*stayed the same* *improved* *improved a lot*

**II. Competence—reading, writing and computation (per class). See attachment.**

**III. Communication—listening and oral communication.**

I understand directions.

*stayed the same* *improved* *improved a lot*

I listen to my co-workers' questions.

*stayed the same* *improved* *improved a lot*

I listen to my family members—wife/husband/children/other family/friends.

*stayed the same* *improved* *improved a lot*

I ask questions clearly.

*stayed the same* *improved* *improved a lot*

I give explanations.

*stayed the same* *improved* *improved a lot*

**IV. Adaptability**

I don't wait for someone else to tell me what to do—I figure it out for myself.

*stayed the same* *improved* *improved a lot*

I think about new/better ways to do things at work.

*stayed the same* *improved* *improved a lot*

## V. Personal Management

I value my opinions and my contributions.

*stayed the same*                      *improved*                      *improved a lot*

I offer my opinions to others.

*stayed the same*                      *improved*                      *improved a lot*

I plan ahead in my personal life.

*stayed the same*                      *improved*                      *improved a lot*  
(If you wish, please say what your plans are:

---

I plan ahead at work.

*stayed the same*                      *improved*                      *improved a lot*

(If you wish, please say what your plans are:

---

I am comfortable working alone.

*stayed the same*                      *improved*                      *improved a lot*

I am a more active member of my community (e.g., Church, school groups, community groups, other). Please name group/s: \_\_\_\_\_

*stayed the same*                      *improved*                      *improved a lot*

## VI. Group Effectiveness

I work well with my co-workers.

*stayed the same*                      *improved*                      *improved a lot*

I like to work in a team.

*stayed the same*                      *improved*                      *improved a lot*

I am willing to talk about my needs with my department head or group leader.

*stayed the same*                      *improved*                      *improved a lot*

I try to help others' efforts to increase their skills.

*stayed the same*                      *improved*                      *improved a lot*

I try to help others' learning efforts at home.(e.g.: husband/wife, children, other family, friends). Please name who you help: \_\_\_\_\_

*stayed the same*                      *improved*                      *improved a lot*



**CLASS EVALUATION**

I thought that the lesson was useful to me.

*never*                      *sometimes*                      *often*                      *usually*                      *always*

I understood most of the lesson.

*never*                      *sometimes*                      *often*                      *usually*                      *always*

When I didn't understand the instructor(s) and/or my classmates helped me.

*never*                      *sometimes*                      *often*                      *usually*                      *always*

I could ask and answer questions or give ideas without feeling worried or embarrassed.

*never*                      *sometimes*                      *often*                      *usually*                      *always*

I enjoyed the lessons.

*never*                      *sometimes*                      *often*                      *usually*                      *always*

I got a chance to talk enough—I was asked questions.

*never*                      *sometimes*                      *often*                      *usually*                      *always*

I could bring real life problems to the class and talk about them and work on solutions.

*never*                      *sometimes*                      *often*                      *usually*                      *always*

I thought that the instructor understood his/her subject.

*never*                      *sometimes*                      *often*                      *usually*                      *always*

The instructor was interested in my homework and gave me helpful suggestions on it.

*never*                      *sometimes*                      *often*                      *usually*                      *always*

Are you interested in continuing this class?

Yes                      No

If your answer was **Yes**, please say why you would like to continue.

---

---

---

If your answer was **No**, please say why you don't want to continue.

---

---

---

**I liked these parts of my class:**

---

---

---

---

---

---

**I wish we had done more:**

---

---

---

---

---

---

# ATTACHMENT X

Name: \_\_\_\_\_

Position: Department Head/  
Supervisor

Company: \_\_\_\_\_

Department: \_\_\_\_\_

Date: \_\_\_\_\_

1. I currently have \_\_\_\_\_ employees enrolled in the Workplace Education Program
2. To date I have had \_\_\_\_\_ workers enrolled
3. I do/do not actively encourage workers to enroll in the program
4. I do/do not understand the workplace literacy program in place now
5. I do/do not keep track of the errors made and who made them when I check my daily production reports
6. When employees go to class I find that it interrupts my production  
never                      seldom                      sometimes                      often
7. I do/do not believe that I should identify areas needing improvement of specific enrolled employees with the coordinator of the program
8. Please circle which alternative you believe that participation in the education program has proved for workers under your supervision

\*Workers are not afraid to ask questions about things they don't understand

*stayed the same*                      *Improved*                      *Improved a lot*

\*Workers understand directions

*stayed the same*                      *Improved*                      *Improved a lot*

\*Workers figure out ways do things themselves

*stayed the same*                      *Improved*                      *Improved a lot*

\*Workers discover and apply new/better ways to do things at work

*stayed the same*                      *Improved*                      *Improved a lot*

\*Workers work well with co-workers

*stayed the same*                      *Improved*                      *Improved a lot*

\*Workers are developing sense of team work and team identity

*stayed the same*                      *Improved*                      *Improved a lot*



|  |                 |                       |
|--|-----------------|-----------------------|
| <b>*Workers can describe their jobs</b>                              |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |
| <b>*Workers can relate their jobs to overall production</b>          |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |
| <b>*Workers inspect parts of their equipment</b>                     |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |
| <b>*Workers practice maintenance of their equipment</b>              |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |
| <b>*Workers practice cleanliness of their equipment/surroundings</b> |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |
| <b>*Workers take safety precautions</b>                              |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |
| <b>*Workers understand need for Quality Control</b>                  |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |
| <b>*Workers can read graphs around the plant</b>                     |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |
| <b>*Workers can understand SPC procedures in the plant</b>           |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |
| <b>*Workers have gained confidence</b>                               |                 |                       |
| <i>stayed the same</i>   | <i>Improved</i> | <i>Improved a lot</i> |

**9. I think the program could be better if it addressed these needs:**

---

---

---

# ATTACHMENT XI

## BIBLIOGRAPHY

1. **ESL at Work: A Tool Kit for Teachers**, Barndt, Deborah, New Readers Press, Center for Workforce Education, Laubach International Publishing Division, BOX 131, Syracuse, New York, NY 13210-0131
2. **Workplace Dynamics, Basic Skills for Quality**, McVey Associates, New Readers Press, Center for Workforce Education, Laubach International Publishing Division, BOX 131, Syracuse, New York, NY 13210-0131
3. **Education in the Workplace: An Employer's Guide to Planning Adult Basic Skills Programs in Small Business and Industry in Massachusetts**, Laura, Sperazi, Commonwealth literacy Campaign, 1991. Order from: Kathy Day, Director of Special Programs (JTPA) Department of Employment and Training, 19 Staniford Street, Boston, MA 02114. Phone: (617 727-6480
4. **Teaching English in the Workplace**, Belfiore, Mary Ellen, Barnaby, Barabara, Toronto: OISE Press, 1984. Order from: Dominic Press Limited, 345 Nugget Avenue, Agincourt, Ontario MIS 4J4.
5. **Curriculum Development Resources for Nursing Homes: Teaching and Learning English as a Second language**, Lloyd David, Katherine Archer, Johan Uvin, CEI/CACA, 1991. Order from: Continuing Education Institute, 35 Highland Circle, Needham, MA
6. **Massachusetts Coalition for Adult Education: Workplace Education Directory**. Order from: David Rosen, 7 Newsome Park, Boston, MA 02130. Phone: (617) 522-6481
7. **Workplace Education: Voices from the Field, Evaluation Research**, U.S.DOE, 1992. Order from: U.S. Department of Education, Division of Adult Education and Literacy, Office of Vocational and Adult Education, 400 Maryland Avenue, S.W., Washington, D.C. 20202-7240. Phone: (202) 205-9872
8. **Workplace Basics**  
Anthony Carnevale, Leila Gainer, and Ann Meltzer  
Part of the ASTD Best Practices Series: Training  
for a Changing Work Force  
Jossey-Bass Publishers  
San Francisco 1990
9. **Adult Literacy: Issues for Policy and Practice**  
Hal Beder  
Krieger Publishing Company  
Malabar, Florida 1991



**10. The Adult Learner: a Neglected Species**

Malcom Knowles  
Gulf Publishing Company, Book Division  
Houston 1984

**11. Many Literacies: Modules for Training Adult Beginning Readers and Tutors** by Marilyn Gillespie

**RESOURCES**

**For Business:**

Frederick Ritzau, Vice President for Human Resources, United Electric Controls Company, 180 Dexter Ave, Watertown, MA 02172.  
Phone: (617) 926-1000.

Robert Fowler, President, Hampden Paper Company, 100 Water St., P.O. Box 149, Holyoke, MA 01041. Phone: (413) 536-1000.

Joseph DiRoberto, Assistant Vice President/Facility Manager. TJMAXX Distribution Center. 135 Goddard Dr., Worcester, MA 1603.  
Phone: (508) 797-8600.

**For Organized Labor:**

Charles Colby, President, New England Joint Board, Mechanical and Allied Production Workers Union, Local 444, Pneumatic Scale Company, 65 Newport Ave., Street, Quincy, MA 02171.  
Phone: (617) 328-6100, Ext. 369.

Warren Peppicelli, Manager, Boston Joint Board, International Garment Workers Union, AFL-CIO. 33 Harrison Ave., Boston, MA 02111. Phone: (617) 426-9350.

**For Education**

Johan Uvin, Director, ILGWU Workplace Education Project, Chinese American Civic Association, 90 Tyler St., Boston, MA 02111.  
Phone: (617) 426-8673.

Kathy Rentsch, Workplace Education Coordinator, Center for Lifelong Learning, Quinsigamond Community College, 670 West Boylston St., Worcester, MA 01606. Phone: (508) 853-2300.

Merle Coughlin and Jane Brown, Adult Learning Center, Bristol Community College, 64 Durfee Street, Fall River, MA 02720.  
(508) 578-2811 ext. 2274 or 2368.

**Resources: Offices and People to Contact**

The State partners in the Massachusetts Workplace Education Initiative

**Robert Bickerton, Director, Bureau of Adult Education,  
1385 Hancock St., Quincy, MA. 02169. Phone: (617) 770-7500.**

**Robert Bosarjian, Coordinator, Federal Workplace Education  
Programs, Bureau of Adult Education, 1385 Hancock St., Quincy, MA  
02169. Phone: (617) 770-7473.**

**Kathy Carol Day, Special Program Administrator, Department of  
Employment Training, 19 Staniford St., 2 Fl., Boston, MA 02144.  
Phone: (617) 727-6480.**

**Judy Hikes, Basic Education Specialist, Industrial Services  
Program, 1 Ashburton Place, Rm. 1413. Boston, MA 02108.  
Phone: (617) 727-8158.**

**Allyne Pescevitich, the Coordinator of the Commonwealth Literacy  
Campaign, can be reached at 1385 Hancock St., Quincy, MA 02169.  
Phone: (617) 770-7376.**

**Resources, including reports on workplace education and sample  
curricula, will be available through the Central Resource Center  
for the System of Adult Basic Education Support (SABES), the  
statewide training and assistance agency supported through the  
Massachusetts Department of Education. Sally Waldron, the  
Director of SABES, can be reached at World Education, Inc.,  
210 Lincoln St., Boston, MA 02111 Phone: (617) 482-9485.**

**The Adult Literacy Resource Institute provides free staff  
development, technical assistance, and library services primarily  
to Greater Boston Adult Basic Education Programs. It is also  
the Regional Support Center for Greater Boston for SABES (see  
above). The Adult literacy Resource Institute has a workplace  
education library and a workplace education teacher sharing  
group. The address is 989 commonwealth Ave., Boston, MA 02215.  
Phone: (617) 782-8956.**

**The Massachusetts Workplace Education Directory is a directory of  
workplace education programs throughout the State. It was  
published in May 1991 by the Massachusetts Coalition for Adult  
Education, and edited by David Rosen. For more information, you  
can reach David Rosen at Newsome Associates, 7 Newsome Park,  
Boston, MA 02130. Phone: (617) 522-6481.**

**The Adult Literacy Subcommittee of the Greater Boston Chamber of  
commerce has become very active in workplace education. It  
sponsors workshops and seminars on workplace education throughout  
the year. Mary Ann Hardenbergh is the Chairperson of Adult  
Literacy Subcommittee. She can be reached at the Mt. Auburn  
Hospital, 300 Mt. Auburn St., Cambridge, MA 02238.  
Phone: (617) 499-5088.**

**For more information about the Greater Boston Chamber of  
Commerce, call or write Karen O'Connor at the Education  
Department, Greater Boston Chamber of Commerce.**

# ATTACHMENT I

## BRISTOL COMMUNITY COLLEGE ENGLISH SKILLS TRAINING NEEDS ASSESSMENT

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Department: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_

Please identify the English language skills needed on the job.  
Re-number these in order of importance for your particular department.

### EXAMPLE

- 1 (7) Warn others about emergency Add more specifics if you wish  
on floor.
- 
- \_\_\_\_\_ (1) Listen to /understand basic  
directions & ask questions when  
didn't understand. (1) \_\_\_\_\_
- \_\_\_\_\_ (2) Understand Right to Know &  
chemical safety. (2) \_\_\_\_\_
- \_\_\_\_\_ (3) Problem solve. (3) \_\_\_\_\_
- \_\_\_\_\_ (4) Understand and complete  
production sheet. (4) \_\_\_\_\_
- \_\_\_\_\_ (5) Understand written instructions  
I.e. Traveler when read aloud. (5) \_\_\_\_\_
- \_\_\_\_\_ (6) Read and comprehend written in-  
structions I.e. Traveler on his/her  
own. (6) \_\_\_\_\_
- \_\_\_\_\_ (7) Warn others about emergency on  
floor. (7) \_\_\_\_\_
- \_\_\_\_\_ (8) Be an effective team member &  
understand need for TQM. (8) \_\_\_\_\_
- \_\_\_\_\_ (9) Communicate desire for absence  
from work for personal or family  
reasons (I.e. sick leave). (9) \_\_\_\_\_
- \_\_\_\_\_ (10) Read and interpret quantitative  
data (charts, graphs, diagrams). (10) \_\_\_\_\_

ADD others if necessary. \_\_\_\_\_

What math skill (if any) is most important in your department? (Use of ruler? Subtraction of  
decimals?)

**LANGUAGE FOR THE FLOOR:**

Lift these boxes.

Switch off that machine.

**LANGUAGE RELATED TO THE JOB:**

Can you show me how to \_\_\_\_\_?

Have you completed your report?

**LANGUAGE RELATED TO THE WORKPLACE:**

Can you explain this deduction?

Where's the training class?

**LANGUAGE FOR THE FLOOR:**

---

---

---

---

---

---

**LANGUAGE RELATED TO THE JOB:**

---

---

---

---

---

---

**LANGUAGE RELATED TO THE WORKPLACE:**

---

---

---

---

---

---

---

# BCC ENGLISH SKILLS TRAINING NEEDS ASSESSMENT

## READING AND WRITING

Name: \_\_\_\_\_

Department: \_\_\_\_\_

Floor: \_\_\_\_\_

Company: \_\_\_\_\_

Please identify the reading/writing skills needed on the job. Circle 1 (low) to 5 (high) to rate the importance of these skills in your particular department:

|      |  | Not<br>Important |   |   |   | Very<br>Important |   |
|------|--|------------------|---|---|---|-------------------|---|
| (1)  | Read/interpret notices around the plant.                                 | (1)              | 1 | 2 | 3 | 4                 | 5 |
| (2)  | Read/interpret manufacturing process instructions.                       | (2)              | 1 | 2 | 3 | 4                 | 5 |
| (3)  | Read/interpret basic health, stress avoidance, safety procedures on job. | (3)              | 1 | 2 | 3 | 4                 | 5 |
| (4)  | Read/understand company statements.                                      | (4)              | 1 | 2 | 3 | 4                 | 5 |
| (5)  | Read/interpret quality control tools - i.e. checksheets, graphs, charts. | (5)              | 1 | 2 | 3 | 4                 | 5 |
| (6)  | Fill out order forms /lists /time sheets.                                | (6)              | 1 | 2 | 3 | 4                 | 5 |
| (7)  | Participate in work related meetings/ take notes.                        | (7)              | 1 | 2 | 3 | 4                 | 5 |
| (8)  | Complete reports/logs.   | (8)              | 1 | 2 | 3 | 4                 | 5 |
| (9)  | Complete application forms - promotion/leave.                            | (9)              | 1 | 2 | 3 | 4                 | 5 |
| (10) | Complete/interpret insurance claim forms.                                | (10)             | 1 | 2 | 3 | 4                 | 5 |

List below other reading/writing needs of your workers:

|       |   |   |   |   |   |
|-------|---|---|---|---|---|
| _____ | 1 | 2 | 3 | 4 | 5 |
| _____ | 1 | 2 | 3 | 4 | 5 |
| _____ | 1 | 2 | 3 | 4 | 5 |

**BCC & (Company Name)  
PARTICIPANTS LIST**

NAME \_\_\_\_\_ DEPT \_\_\_\_\_ FLOOR \_\_\_\_\_

List below the workers in your department who might benefit from training classes. Indicate level — Beginner, Intermediate, or Advanced. Add comments, such as "Long range goal is HS diploma."

**Beginner:** May know some words or phrases in English.  
Does not understand explanations in English.  
Cannot ask for assistance in English.  
Supervisors must give instructions/explanations in Portuguese/Korean/Spanish, etc.

**Intermediate:** Appears to understand instructions in English.  
Unsure about asking questions in English.  
May be able to follow some basic parts of Traveler.

**Advanced:** Able to read Traveler and ask questions.  
Makes some errors but communicates in English.  
Not afraid to ask questions in English.  
Does not know many technical terms in English.

| Name of Worker: | Circle Language Level: |     |     | Comments: |
|-----------------|------------------------|-----|-----|-----------|
|                 | Beg                    | Int | Adv |           |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |
| _____           | B                      | I   | A   | _____     |





BCC & (Company Name)  
**MATH ASSESSMENT**

NAME: \_\_\_\_\_ DEPARTMENT: \_\_\_\_\_

Circle your  
answer

**I Do the workers in your department need to understand whole numbers?**

YES

NO

If your answer is **YES**,  
please check the procedures that they need to learn to understand how to use whole numbers in your department.

**Check here:**

- \_\_\_ 1. Reading, writing, and counting single- and multiple-digit whole numbers.
- \_\_\_ 2. Adding and subtracting single- and multiple-digit whole numbers.
- \_\_\_ 3. Multiplying and dividing single- and multiple-digit whole numbers.
- \_\_\_ 4. Using addition, subtraction, multiplication, and division to solve problems with single- and multiple- digit whole numbers.
- \_\_\_ 5. Rounding off single- and multiple-digit whole numbers.

**II Do the workers in your department need to understand how to use fractions?**

YES

NO

If the answer is **YES**,  
please check the procedures that they need to learn to understand how to use fractions in your department.

- \_\_\_ 1. Reading and writing common fractions.
- \_\_\_ 2. Adding and subtracting common fractions.
- \_\_\_ 3. Multiplying and dividing common fractions.
- \_\_\_ 4. Solving problems with common fractions.

**III. Do the workers in your department need to understand how to use decimals?**

YES

NO

If the answer is **YES**,  
please check the procedures that they need to learn to understand how to use decimals in your department.

- \_\_\_ 1. Carrying out arithmetic computations using dollars and cents.
- \_\_\_ 2. Reading and writing decimals in one or more places.
- \_\_\_ 3. Rounding off decimals in one or more places.
- \_\_\_ 4. Multiplying and dividing decimals in one or more places.
- \_\_\_ 5. Adding and subtracting decimals in one or more places.
- \_\_\_ 6. Solving problems with decimals in one or more places.



2. NAME: \_\_\_\_\_ DEPT: \_\_\_\_\_

IV. Do the workers in your department need to understand how to use percent? YES NO

If the answer is YES ,  
please check the procedures that they need to learn to understand how to use percent in your department.

- \_\_\_ 1. Reading and writing percentages.
- \_\_\_ 2. Computing percentages.

V. Do the workers in your department need to understand how to use mixed operations? YES NO

If the answer is YES,  
please check the procedures that they need to learn to understand how to use mixed operations in your department.

- \_\_\_ 1. Converting fractions to decimals, percentages to fractions, fractions to percents, percentages to decimals, decimals to percentages, common fractions and mixed numbers to decimal fractions, and decimal fractions to common fractions and mixed numbers.
- \_\_\_ 2. Solving problems by selecting and using correct order of operations.
- \_\_\_ 3. Performing written calculations quickly.
- \_\_\_ 4. Computing averages.

VI. Do the workers in your department need to understand how to use measurements and calculations? YES NO

If the answer is YES,  
please check the procedures that they need to learn to understand how to use measurements and calculations in your department.

- \_\_\_ 1. Reading numbers or symbols from time, weight, distance, and volume measuring scales.
- \_\_\_ 2. Using a measuring device to determine an object's weight, distance, or volume in standard (English) units.
- \_\_\_ 3. Using a measuring device to determine an object's weight, distance or volume in metric units.
- \_\_\_ 4. Performing basic metric conversions involving weight, distance, or volume.
- \_\_\_ 5. Solving problems involving time, weight, distance, and volume.
- \_\_\_ 6. Using a calculator to perform basic arithmetic operations to solve problems.

3. NAME: \_\_\_\_\_ DEPT: \_\_\_\_\_

VII. Do workers in your department need to understand how to use estimation?

YES

NO

If your answer is YES ,  
please check this procedure if your workers need to understand it.

\_\_\_ 1. Determining whether a solution to the problem is reasonable.

**THANK YOU VERY MUCH. IF YOU HAVE ANY MORE SUGGESTIONS FOR NEEDS FOR MATHEMATICS IN THE WORKPLACE, PLEASE WRITE THEM ON THIS SHEET.**