This guidebook was designed to be a practical guide in developing workplace education programs. The handbook includes the following three sections: (1) background information, including details and supporting information about workplace education; (2) workplace education worksheets that adult education supervisors can take to the worksite to use as a guide when they are talking with business and industry representatives about workplace education programs; and (3) attachments that provide information and forms needed to conduct workplace education programs. The following attachments are included: needs assessment; sample job tasks analysis format and form; initial meeting plan; work-specific curriculum development schematic; pre- and postprogram employee surveys; information on adult education instructor selection; samples of an individual education plan, a vocabulary section, and an instruction plan for vocabulary instruction for the textile industry; and a workplace education resource list of 12 sources. (KC)
WORKPLACE EDUCATION PROGRAMS

ADULT EDUCATION SUPERVISOR'S HANDBOOK

Alabama State Department of Education
Auburn University - Department of Vocational & Adult Education
ACKNOWLEDGMENTS

We wish to express appreciation to Ms. Becky Dunn (Russell Corporation), Chairperson, and other members of the Alabama Textile Manufacturers Association (ATMA) Education Committee for giving us permission to use a research paper they produced. The ATMA research allowed us to view workplace education from a business perspective.

In addition, we would like to thank Russell Corporation for allowing us to use samples of their work specific curriculum developed as a part of this overall 353 project.
This handbook was designed as part of a Special 353 Demonstration Project. The project was funded by the State Department of Education, Adult Education Section to Auburn University, Vocational and Adult Education Department.

This handbook is to be used by adult education supervisors when working with business and industry. The information may be used as a guide for the development of a workplace education program, in a local business/industry.

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Fort Payne, AL
For more information about the new resource center, you may contact the following:

State of Alabama Department of Education
Adult Education Offices
Gordon Persons Building
50 N Ripley Street
Montgomery, Alabama 36104-3833
800-392-4086

Auburn University
Department of Vocational and Adult Education
209A George Wallace Building
Auburn University, Alabama 36849-5529
For more information about a workplace education tax credit, you may contact the following:

Dr. Bobby B. Dees, Adult Education Director
State of Alabama Department of Education
Gordon Persons Building
50 N Ripley Street
Montgomery, AL 36104-3833
800-392-8086

Alabama Foundation for Workplace Education
P.O. Box 3534
Montgomery, AL 36109
205-271-5299
The ultimate goal of a workplace education program is to improve the productivity of the workforce -- through the improvement of the employees' literacy abilities.

Eighty-five percent of the expected workforce 2000 is already in the workplace.

Ninety-eight percent of all jobs require some reading.

Seventy percent of the reading material on the job is from 9th grade to college graduate level.

The Department of Education recently reported that 47 percent of the nation's 191 million adults lack basic reading skills. (90 million Americans)

The majority of the new jobs in the year 2000 will require some postsecondary education.
TABLE OF CONTENTS
WORKPLACE EDUCATION
SUPERVISOR'S HANDBOOK

SECTION I
BACKGROUND INFORMATION
Details and supporting information about workplace education are in this section. The background information text should be read before the supervisor visits the employer.

SECTION II
WORKPLACE EDUCATION WORKSHEETS
These worksheets are to be taken by adult education supervisors to the work site. They will be used as a guide when talking with business and industry representatives about workplace education programs.

SECTION III
ATTACHMENTS
Attachment A Needs assessment
Attachment B Sample job tasks analysis format
Attachment C Sample job tasks analysis form
Attachment D Initial meeting plan
Attachment E Work specific curriculum developmental schematic
Attachment F Pre-program employee survey
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Attachment H Selecting an adult education instructor
Attachment I Sample of workplace education content vocabulary section (textile industry)
Attachment J Sample individual education plan vocabulary section (textile industry)
Attachment K Sample lesson vocabulary section (textile industry)
Attachment L Sample instruction plan vocabulary section (textile industry)
Attachment M A workplace education resource list
The supervisors should read the following pages before visiting the employer. Section I objectives are to:

- Inform the supervisors of reasons why business and industry desire a literate workforce
- Assist the supervisors in distinguishing among workplace education program types
- Provide the supervisors with a framework for developing work specific workplace education programs
A LITERATE WORKFORCE

Management commitment to an education program will provide an opportunity for employees to improve their skills, which will benefit the business. Some employees will be given the personal opportunity to fulfill their lifelong dream of getting a GED. The rewards will be significant for both business and the employee!

Business and Industry desire a literate workforce because literacy promotes the following:

- Improved self-esteem
- Increased confidence
- Better communication
- Skills in problem analysis
- Improved listening skills
- Improved efficiency
- Reduced operating costs*
- Improved morale
- Enhanced employer and employee relations

*Workers' compensation and industrial accidents, due to lack of training, are costly. Workplace basic skills programs may reduce these costs.
WORKPLACE EDUCATION PROGRAMS
BACKGROUND INFORMATION

TYPES OF WORKPLACE EDUCATION PROGRAMS

1. **Literacy programs** are designed for employees with low reading levels. The focus is on skills such as recognizing and combining letters in print to form words. These programs are usually conducted by literacy tutors (one-on-one instruction). The transfer of skills to job performance is generally not addressed. Instructional materials may include *Laubach Way To Reading*, published by New Readers Press.

2. **Basic skills programs** focus on academic applications of basic skills -- solving mathematical problems, writing essays, reading exercises. These programs generally will not teach employees how to transfer basic skills to the performance of job tasks. Instructional materials may include textbooks and commercial materials such as Steck-Vaughn and Contemporary. The Alabama Adult Education Curriculum will serve as a guideline.

3. **Work specific education programs** are a hybrid of education and training -- they offer instruction in basic skills applications as they relate to the employees' jobs; thus, it teaches employees how to transfer such skills to the performance of job tasks.

Work specific education is the most time consuming of the types outlined; however, its benefits are generally greater -- productivity, product quality, reduced absenteeism, decreased accident rates, increased retention of employees, etc. Details follow on the development of work specific education programs.

4. **Technical training programs** are designed to teach specific organizational procedures or information related to performing a job, such as operating a new computer system in a warehouse setting, operating a piece of equipment, or complying with safety rules. Instructional materials are usually work specific and company generated.
DEVELOPMENT OF WORK SPECIFIC WORKPLACE EDUCATION PROGRAMS

1. Identify program goals and objectives
   Not only are company goals considered, but also the employees' goals.

2. Identify critical job tasks

3. Conduct an employee assessment
   Will a standard assessment procedure be used for the industry, company, plant, department, etc.? Will the assessment be criterion referenced (CASAS) or norm referenced (TABE)?

4. Make decisions regarding voluntary versus mandatory participation

5. Make decisions on employee release time versus personal time

6. Create program awareness
   Examples of creating program awareness may include:
   
   . Bulletin board notices offering the opportunity to enroll
   
   . Employee meetings
   
   . Invitations to talk with an adult education instructor at an informal gathering
   
   . An announcement of the partnership with adult education in community
   
   . A company newsletter explaining the program, etc.
7. **Conduct a job task analysis**
   Job task analyses (JTA) provide information about how workers apply basic skills and thinking strategies to perform a task. Information about the work environment is also collected. During the JTA, copies of work related materials are collected. These materials include forms, sample pages of equipment manuals, and other materials the employees must read or enter data on. See attachment B for JTA format.

8. **Develop a work specific education curriculum**
   1. The writer may be an educator outside the company, or the company may designate an employee to write the curriculum with the assistance of a local provider.
   2. The content for the curriculum is determined by the company.
   3. Lesson scripts and activities should follow a structured format.
   4. The Alabama Adult Education Curriculum Basic Skills - Scope and Sequence serves as an excellent guide for curriculum development.

9. **Recruit program participants**
   Who will participate in the program? How will they be identified?
   1. Suggestion - Review employee records for education background. The employment application may have information on school achievement.
   2. Some employees may have expressed an interest in getting their GED. Furthermore, they usually know of others who don't have high school diplomas.
   3. Employee assessment
DEVELOPMENT OF WORK SPECIFIC WORKPLACE EDUCATION PROGRAMS

10. **Select an instructor**
A critical part of workplace education programs is the instructor's ability to transfer theory and knowledge to specific applications. Important questions to be answered include the following:

- Who will teach and facilitate the classes?
- What educational background does the instructor have?
- What are the instructor's philosophies regarding adult learning? See examples 1-4 below.

**EXAMPLES OF INSTRUCTOR'S PHILOSOPHIES ON ADULT EDUCATION**

1. Adults have a deep psychological need to be generally self-directing.
2. They want to apply whatever knowledge and skill they gain today to functioning more effectively tomorrow.
3. Adult learners usually must experience a need to learn. The educator is responsible for creating conditions and providing tools and procedures for helping learners recognize their "needs to know."
4. Adults bring into the classroom a large reservoir of experience that is a rich resource for learning -- for themselves and others.

(Reference *The Modern Practice of Adult Education*, Malcolm S. Knowles)

11. **Evaluate program**
Program evaluations are essential. The evaluations should be a joint project among Adult Educators and Business and Industry, including participating employees. Everyone will benefit!
The supervisors should take this section to the work site. The worksheets will be used as a guide when talking with business and industry representatives about workplace education programs. Section II objectives are to provide:

- Supervisors with workplace education statistics
- A worksheet for determining the need for adult education classes (workplace education classes)
- A brief program participant worksheet
- A worksheet on contributors to retention in program
- Information on workplace program evaluations
WORKPLACE EDUCATION PROGRAMS

Alabama State Department of Education
Auburn University - Department of Vocational & Adult Education
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The Department of Education recently reported that 47 percent of the nation's 191 million adults lack basic reading skills. (90 million Americans)

The majority of the new jobs in the year 2000 will require some postsecondary education.

For more information about your own workplace education program, call: 

Your local adult education contact is: 

________________________________________

________________________________________

________________________________________

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WORKPLACE EDUCATION PROGRAMS

STEP I DETERMINING THE NEED FOR ADULT EDUCATION CLASSES

1. What are the company's goals and objectives for this program?

2. Is a class needed for basic skills to improve reading, writing, and math skills?

3. Is a class needed for GED test preparation?

4. Is a class needed to teach job specific terminology and/or materials that are used on the job?

5. How will the program be announced?
   - Bulletin board notices
   - Employee meetings
   - Brochures
   - Other

6. What is the projected time for the program, if any?

7. When will the classes be scheduled?

8. Where will the classes be located?
   - On-site
   - Off-site

9. What will be the recognition for completion of the program?
WORKPLACE EDUCATION PROGRAMS

STEP II PROGRAM PARTICIPANTS

1. How many employees will participate in the program?

2. How will participants be identified? Voluntary?

Resources for participant identification might include level of education, job performance evaluation, pre-employment screening, interview with supervisor, TABE scores, etc.
WORKPLACE EDUCATION PROGRAMS

STEP III            CONTRIBUTORS TO RETENTION IN PROGRAM

Conduct classes on-site at the plant location. Workplace education at the workplace facilitates attendance and interest. If there is not a training room or area suitable for a classroom, schedule the class close to the worksite.

The following is a checklist of factors that contribute to program retention:

1. Classes meet on-site
2. Classes meet in surroundings familiar to most employees
3. Employees attend class with people they already know
4. Transportation problems are minimal
5. Child care problems are minimal
6. Location is conducive to management involvement
7. Participation can be observed by management
8. First day of class is made special
9. Refreshments are provided periodically for class by management
10. Quality instruction is offered to participants
11. Teachers are well trained
12. Individualized instruction is built into the work specific curriculum via supplementary materials and suggested instruction guidelines
13. Assurance of participant success
14. Participant goal and objective surveys are given at regular intervals and may be reviewed by management
The following checklist includes suggestions for employee recognition:

1. Luncheon or dinner for GED recipients
2. Screen printed T-shirts with appropriate logo or message
3. Announcements in company newsletter/newspaper of GED recipients
4. Certificates of achievement from company
5. Employee meetings
   Recognition of program attendance or GED
6. Chamber of Commerce newsletters regarding company on-site classes and/or GED recipients
7. GED graduation ceremonies
8. Other

____

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Evaluations are necessary for feedback. Listed below are several reasons.

- Evaluations provide information about the quality of the program.
- Participants are given feedback to determine if their goals are being met.
- Participants give feedback on program.
- Due to evaluation results, the instructor(s) may decide that modifications are needed for current and/or future programs.
- Evaluations often clarify program goals and objectives.
- Evaluations determine if company and individual goals are being met, or if improvements in the program are needed.

Some outcomes are extremely difficult to measure; therefore, soft effects (e.g., employee attitude, retention, productivity, and morale) are assessed.

Statistics and Evaluation
Before and during the program, various statistics can be accumulated. These include the following:

1. Number of employees at the beginning of the program
2. Number of employees at the end of program
3. Academic gains during program
4. Achieved goals of participants
5. Number of GEDs received
6. Monthly turnover
7. Number of employees terminated
8. Number of new hires
9. Percentage of absenteeism
10. Work related accidents
11. Insurance claims
12. Reduction in health care costs
13. Lost time
14. Production output
15. Production errors
16. Number of reprimands for absenteeism
17. Number of reprimands for discipline
SECTION III
ATTACHMENTS A-M

The objectives of Section III are to provide supervisors with a resource of practical information -- on workplace education programs. The following pages may be used by supervisors interested in specific areas; e.g., an initial meeting plan, work specific curriculum developmental schematic, pre-program employee survey, etc.

Section III includes the following attachments:

- Attachment A: Needs assessment
- Attachment B: Sample job tasks analysis format
- Attachment C*: Sample job tasks analysis form
- Attachment D: Initial meeting plan
- Attachment E: Work specific curriculum developmental schematic
- Attachment F: Pre-program employee survey
- Attachment G: Post-program employee survey
- Attachment H: Selecting an adult education instructor
- Attachment I: Sample of workplace education content vocabulary section (textile industry)
- Attachment J: Sample individual education plan vocabulary section (textile industry)
- Attachment K: Sample lesson vocabulary section (textile industry)
- Attachment L: Sample instruction plan vocabulary section (textile industry)
- Attachment M: A workplace education resource list

Adult education supervisors are encouraged to use these attachments in workplace education programs. The attachments may be duplicated as needed!

*Includes the Alabama Adult Education Curriculum Basic Skills - Scope and Sequence
ATTACHMENT A

NEEDS ASSESSMENT (BUSINESS AND INDUSTRY)
The following is a literacy problem checklist for business and industry:

- Production errors
- Absenteeism
- Poor quality
- Waste
- Accidents
- Misuse of equipment
- High turnover
- Poor employee morale
- Profit loss
ATTACHMENT B
SAMPLE JOB TASKS ANALYSIS FORMAT

(SEE ITEM ¶7, SECTION I, DEVELOPMENT OF WORK SPECIFIC WORKPLACE EDUCATION PROGRAMS)
Organize an advisory committee
Among their many responsibilities, the committee will identify critical jobs and job tasks.

Review job descriptions

Observation
Observe employees to determine the basic skills they use to perform their jobs effectively.

Watch the employees throughout a workday. Be sure you have observed all job tasks that were identified as being critical.

Record when the employee reads, writes, or does a mathematical calculation.

Document the setting in which basic skills activities take place.

Document whether the tasks are performed individually or in groups.

Collection of work materials
Collect and review all materials that are written and read on the job. Collection includes memoranda, sample pages of equipment manuals, telephone messages, bills of sale, order forms, etc.

Ask for a copy of all forms the employees work with. Make certain to obtain a clean copy as well as a completed copy.

Analyze the materials to determine reading levels.

Examine the content of these materials to determine their purpose.

Interviews
Interview employees. Ask them what they think the basic skills needed to perform their jobs are.

Document skills that the top-performing employees say are most important. Ask them what are the skills they use most and how they use them.

Interview supervisors. Ask them what skills are critical for effective job performance.

Investigate discrepancies between the employees' and the supervisors' perceptions of skills needed.

Ask both employees and supervisors how they would train a new employee, step by step. For example, "What activity do you do first? How did you know? What is the next activity?" Try to capture the mental process of effective job performance.

Job assessment
Combine the information gathered from observing the employees, collecting the materials they use, and the interviews.

Determine the approximate level that job materials are written on.

Write a description of the jobs with the basic skills (reading, writing, and computation) needed to perform them effectively. Use the JTA form, Attachment C1.
ATTACHMENT C*
JOB TASKS ANALYSIS SAMPLE (COMPLETED)

* ATTACHMENT C WAS EXPANDED TO INCLUDE THE FOLLOWING ATTACHMENTS -- C1 AND C2
## GENERAL DESCRIPTION:

Oversee and adjust machinery to run within acceptable limits.

---

**DATE:** 00/00/00

**JOB TITLE:** Machine Operator

**DEPARTMENT:** XYZ

**JOB NUMBER:** 000

### JOB PROCEDURES

<table>
<thead>
<tr>
<th>JOB PROCEDURES</th>
<th>LITERACY SKILLS NEEDED</th>
</tr>
</thead>
</table>
| A. Literacy skills that apply to all job steps | Uses common knowledge of safety  
Selects appropriate course of action in emergency |
| B. Sequence of basic job steps | |
| 1. Remove scrap from machinery and maintains clean work area | Follows procedural directions  
Applies safety knowledge |
| 2. Checks machinery at regular intervals to determine if running within specified range; uses stopwatch to time inspection intervals | Tells time  
Reads decimals  
Follows procedural directions  
Applies concept of greater than/less than |
| 3. | |
| 4. | |

*FOR LITERACY SKILLS NEEDED SEE REFERENCE -- JORIE W. PHILIPPI, LITERACY AT WORK: THE WORKBOOK FOR PROGRAM DIRECTORS.*
ATTACHMENT C1
ALABAMA ADULT EDUCATION CURRICULUM BASIC SKILLS
SCOPE AND SEQUENCE
ALABAMA ADULT EDUCATION CURRICULUM

BASIC SKILLS - SCOPE AND SEQUENCE

R. READING - The student will:

R.1.0 Demonstrate reading readiness
   R.1.1 Recognize alphabet
   R.1.2 Recognize numerals
   R.1.3 Demonstrate left to right progression
   R.1.4 Identify basic sight vocabulary
   R.1.5 Discriminate visual clues
   R.1.6 Discriminate auditory clues (rhythm, pattern)
   R.1.7 Demonstrate directional vocabulary (oral) -
       (i.e., under, through, first, last)
   R.1.8 Sequence pictures
   R.1.9 Categorize pictures
   R.1.10 Establish sound symbol relationship
   R.1.11 Follow oral directions
   R.1.12 Recognize objects, pictures, and symbols

R.2.0 Read using word recognition skills
   R.2.1.0 Analyze phonetically
       R.2.1.1 Consonant silent letters
       R.2.1.2 Identify initial consonants
       R.2.1.3 Identify final consonants
       R.2.1.4 Identify long and short vowels
       R.2.1.5 Identify letter combinations
       R.2.1.6 Long y with e or i sound
       R.2.1.7 Schwa
       R.2.1.8 R-controlled
       R.2.1.9 Identify word patterns

   R.2.2.0 Analyze structurally
       R.2.2.1 Recognize root words
       R.2.2.2 Recognize prefixes
       R.2.2.3 Recognize suffixes
       R.2.2.4 Separate syllables
       R.2.2.5 Identify compound words
       R.2.2.6 Recognize possessives
       R.2.2.7 Recognize contractions
       R.2.2.8 Differentiate singular and plural words
       R.2.2.9 Recognize abbreviations

   R.2.3.0 Develop vocabulary
       R.2.3.1 Distinguish positional words (i.e. over, under)
       R.2.3.2 Use synonyms, antonyms, and homonyms
       R.2.3.3 Solve word analogies
       R.2.3.4 Utilize context clues
       R.2.3.5 Identify content related sight vocabulary
R.3.0 Read using comprehension skills
R.3.1 Recognize punctuation signals (., ! ?)
R.3.2 Classify information
R.3.3 Define main idea
R.3.4 Author purpose
R.3.5 Author viewpoint
R.3.6 Identify supporting details
R.3.7 Recall details
R.3.8 Develop sequences
R.3.9 Compare/contrast information
R.3.10 Distinguish fact from opinion
R.3.11 Distinguish cause from effect
R.3.12 Draw conclusions
R.3.13 Summarize information
R.3.14 Identify figurative language (idioms, similes, metaphors)
R.3.15 Make predictions
R.3.16 Evaluate information
R.3.17 Character analysis (feeling, motive, trait)
R.3.18 Utilize context clues

R.4.0 Apply study skills
R.4.1 Alphabetize words
R.4.2 Follow directions
R.4.3 Skim and scan information
R.4.4 Locate information (dictionary, reference booksets, table of contents, index)
R.4.5 Organize information (notetaking - directed reading activity)

R.5.0 Expand reading
R.5.1 Identify a variety of reading materials such as novels, short stories, mysteries, plays, poetry, etc.
R.5.2 Use reference, factual, and specialized materials

W. WRITING - The student will:

W.1.0 Demonstrate legible handwriting
W.1.1 Form upper case letters
W.1.2 Form lower case letters
W.1.3 Write a signature
W.1.4 Form numerals
W.1.5 Form symbols

W.2.0 Demonstrate use of correct spelling
W.2.1 Spell a list of sight words
W.2.2 Write plural of words
W.2.3 Use prefixes and suffixes
W.2.4 Spell homonyms
W.2.5 Spell contractions
W.2.6 Spell abbreviations
| W.2.7 | Spell possessives          |
| W.2.8 | Spell commonly confused or misspelled words |
| W.2.9 | Apply common spelling rules |
| W.3.0 | Demonstrate use of punctuation marks |
| W.3.1 | Use sentence ending punctuation |
| W.3.2 | Use commas |
| W.3.3 | Punctuate abbreviations |
| W.3.4 | Use quotation marks |
| W.3.5 | Use apostrophes |
| W.3.6 | Use colons |
| W.3.7 | Use semi-colons |
| W.3.8 | Use hyphens |
| W.4.0 | Demonstrate the use of capitalization |
| W.4.1 | Capitalize the first word of sentences |
| W.4.2 | Capitalize proper nouns and proper adjectives |
| W.4.3 | Capitalize titles |
| W.4.4 | Capitalize the word "I" |
| W.4.5 | Capitalize salutations and closing in letters |
| W.4.6 | Capitalize the first spoken word of a quotation |
| W.5.0 | Demonstrate the use of correct grammar |
| W.5.1 | Identify parts of speech |
| W.5.2 | Use subject/verb agreement |
| W.5.3 | Use correct pronoun agreement and form |
| W.5.4 | Use appropriate verb tenses |
| W.5.5 | Use irregular verb forms |
| W.5.6 | Use contractions |
| W.5.7 | Use possessives |
| W.6.0 | Demonstrate the use of correct sentence structure |
| W.6.1 | Distinguish between a sentence and a phrase |
| W.6.2 | Identify subject and predicate |
| W.6.3 | Recognize four kinds of sentences (Dec., Inter., Imp. Excl.) |
| W.6.4 | Identify types of sentences (simple, compound, complex) |
| W.6.5 | Use modifiers |
| W.7.0 | Demonstrate a composition skills |
| W.7.1 | Write a sentence |
| W.7.2 | Write a paragraph |
| W.7.3 | Topic sentence - identify and develop |
| W.7.4 | Sentence sequencing |
| W.7.5 | Develop a simple outline (topical, phrase, sentence) |
| W.7.6 | Construct a personal letter |
| W.7.7 | Construct a business letter |
| W.7.8 | Use basic proofreading skills |
### M. MATHEMATICS

<table>
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<tr>
<th>M.0.0</th>
<th>Demonstrate precomputational skill</th>
</tr>
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<tbody>
<tr>
<td>M.0.1</td>
<td>Recognize and count numerals</td>
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<td>M.0.2</td>
<td>Establish one-to-one correspondence</td>
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<td>M.0.3</td>
<td>Demonstrate place value</td>
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<td>M.0.4</td>
<td>Convert and use coins and currency</td>
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<tr>
<td>M.0.5</td>
<td>Read numerals</td>
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<td>M.0.6</td>
<td>Write and identify numerals</td>
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<tr>
<td>M.0.7</td>
<td>Explain math vocabulary</td>
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<td>M.0.8</td>
<td>Odd and even numbers</td>
</tr>
<tr>
<td>M.0.9</td>
<td>Compare number values</td>
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<tr>
<td>M.0.10</td>
<td>Counting by 5's, 10's &amp; 20's</td>
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</table>

<table>
<thead>
<tr>
<th>M.1.0</th>
<th>Compute using whole numbers</th>
</tr>
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<tbody>
<tr>
<td>M.1.1</td>
<td>Add whole numbers</td>
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<tr>
<td>M.1.2</td>
<td>Subtract whole numbers</td>
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<tr>
<td>M.1.3</td>
<td>Multiply whole numbers</td>
</tr>
<tr>
<td>M.1.4</td>
<td>Divide whole numbers</td>
</tr>
<tr>
<td>M.1.5</td>
<td>Perform multiple operations using whole numbers (number sentences)</td>
</tr>
<tr>
<td>M.1.6</td>
<td>Estimate and round whole numbers</td>
</tr>
<tr>
<td>M.1.7</td>
<td>Solve whole number word problems</td>
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<table>
<thead>
<tr>
<th>M.2.0</th>
<th>Compute using decimal fractions</th>
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<tbody>
<tr>
<td>M.2.1</td>
<td>Add decimal fractions</td>
</tr>
<tr>
<td>M.2.2</td>
<td>Subtract decimal fractions</td>
</tr>
<tr>
<td>M.2.3</td>
<td>Multiply decimal fractions</td>
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<tr>
<td>M.2.4</td>
<td>Divide decimal fractions</td>
</tr>
<tr>
<td>M.2.5</td>
<td>Perform multiple operations using decimal fractions</td>
</tr>
<tr>
<td>M.2.6</td>
<td>Convert decimal fractions to common fractions or percents</td>
</tr>
<tr>
<td>M.2.7</td>
<td>Estimate and round decimal fractions</td>
</tr>
<tr>
<td>M.2.8</td>
<td>Solve decimal fraction word problems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M.3.0</th>
<th>Compute using fractions</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.3.1</td>
<td>Recognize fractional amounts</td>
</tr>
<tr>
<td>M.3.2</td>
<td>Understand fraction vocabulary</td>
</tr>
<tr>
<td>M.3.3</td>
<td>Add common or mixed fractions</td>
</tr>
<tr>
<td>M.3.4</td>
<td>Subtract common or mixed fractions</td>
</tr>
<tr>
<td>M.3.5</td>
<td>Multiply common or mixed fractions</td>
</tr>
<tr>
<td>M.3.6</td>
<td>Divide common or mixed fractions</td>
</tr>
<tr>
<td>M.3.7</td>
<td>Perform multiple operations using fractions</td>
</tr>
<tr>
<td>M.3.8</td>
<td>Convert common or mixed fractions to decimal fractions or percents</td>
</tr>
<tr>
<td>M.3.9</td>
<td>Solve fractions word problems</td>
</tr>
</tbody>
</table>
M.4.0  Compute using percents
M.4.1  Apply a percent to determine amount of discount
M.4.2  Apply a percent in a context not involving money
M.4.3  Calculate percents
M.4.4  Convert percents to common, mixed, or decimal fractions
M.4.5  Calculate interest
M.4.6  Solve percent word problems

M.5.0  Use expressions, equations, or formulas
M.5.1  Recognize or evaluate simple consumer formulas
M.5.2  Recognize or evaluate simple geometric formulas (perimeter)
M.5.3  Recognize or evaluate simple algebraic formulas

M.6.0  Use measurement
M.6.1  Convert U.S. Customary and standard International Metric System of measurement
M.6.2  Identify points, lines, segments, rays
M.6.3  Measure linear dimensions, geometric shapes, or angles
M.6.4  Recognize geometric symmetry and congruency
M.6.5  Measure area and volume of geometric shapes
M.6.6  Use measurement instruments ie thermometer
M.6.7  Interpret scale drawings
M.6.8  Calculate with units of time
M.6.9  Solve measurement problems

M.7.0  Interpret maps, graphs, tables and charts
M.7.1  Interpret a bar graph
M.7.2  Interpret a picture graph
M.7.3  Interpret a circle graph
M.7.4  Interpret maps
M.7.5  Interpret tables and charts

Revised 3/92
ATTACHMENT C2

JOB TASKS ANALYSIS FORM (CLEAN COPY)
GENERAL DESCRIPTION: 

DATE: ____________________________
JOB TITLE: _______________________
DEPARTMENT: _____________________
JOB NUMBER: _____________________

<table>
<thead>
<tr>
<th>JOB PROCEDURES</th>
<th>LITERACY SKILLS NEEDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Literacy skills that apply to all job steps</td>
<td></td>
</tr>
</tbody>
</table>

B. Sequence of basic job steps

1. ____________________________________________

2. ____________________________________________

3. ____________________________________________

4. ____________________________________________
ATTACHMENT D
INITIAL MEETING PLAN
INITIAL MEETING PLAN

ORGANIZE AND MEET WITH EDUCATION COMMITTEE
PROJECT MEETING DATE __________

↓

PROPOSED MEETING AGENDA
- Make a specific list of problems on the job which may be attributed to deficient basic skills. (Use the list of problem areas from the needs assessment - Attachment A)
- Access existing personnel data, e.g., last grade completed, pre-employment screening, job performance evaluation, etc.
- Discuss an assessment instrument
- Discuss the issue of release time

↓

DECISION - EMPLOYEE ASSESSMENT

↓

DECISION - PROGRAM TYPES

↓

WORKPLACE LITERACY PROGRAM
ADULT EDUCATION PROGRAM (ABE & GED)
TECHNICAL TRAINING PROGRAM
WORK SPECIFIC EDUCATION PROGRAM (Functional context instruction)

See Section I, Types of Workplace Education Programs, Item #3

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ATTACHMENT E
WORK SPECIFIC CURRICULUM DEVELOPMENTAL SCHEMATIC
A functional context approach to education links instruction with specific job materials and situations; i.e., it teaches skill applications as they are used on the job. This approach can provide a direct transfer of learning to job performance. It enhances retention of new skills by building awareness for their immediate use on the job.
ATTACHMENT F
PRE-PROGRAM EMPLOYEE SURVEY

(SEE SECTION I, ITEM #1, DEVELOPMENT OF WORK SPECIFIC WORKPLACE EDUCATION PROGRAMS)
Pre-program Employee Survey
(To determine employee goals/objectives)

Name ____________________________________________

Location ___________________________ Job ____________________________

Program goals

Check any of the following reasons to participate in the program.

I will participate in the program to:

_____ Improve job performance

_____ Prepare for jobs in the future

_____ Gain experience in taking tests

_____ Meet personal goals

_____ Further my education

_____ Get a GED

_____ Improve my reading skills

_____ Improve my math skills

_____ Improve my writing skills

Other ____________________________________________

__________________________________________

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ATTACHMENT G
POST-PROGRAM EMPLOYEE SURVEY

(SEE SECTION I, ITEM #11, DEVELOPMENT OF WORK SPECIFIC WORKPLACE EDUCATION PROGRAMS)
Post-program Employee Survey
(To assess employee goals/objectives)

Name __________________________

Location __________________________ Job __________________________

Program goals

Has this program helped you meet or work toward any of the goals listed below? This program has helped me to: (Please check (✓) the items you select)

- [ ] Improve job performance
- [ ] Prepare for jobs in the future
- [ ] Gain experience in taking tests
- [ ] Meet personal goals
- [ ] Further my education
- [ ] Get a GED
- [ ] Improve my reading skills
- [ ] Improve my math skills
- [ ] Improve my writing skills

Other __________________________
Post-program Employee Survey
(To assess employee goals/objectives)

Name _______________________________

Location ___________________________ Job ___________________________

Circle the number that best describes the program content -- lesson topics and actual lessons

1 interesting
2
3
4 boring

1 useful on my job
2
3
4 useless on my job

1 content too difficult
2
3
4 content too easy

1 useful outside work
2
3
4 useless outside work

Circle the number that best describes the instructional materials -- lesson worksheets

1 hard to learn
2
3
4 easy to learn

Program information

_______ Achieved my goals (write yes or no on the blank line)

_______ Would recommend program to friends (write yes or no on the blank line)

What changes would you make in the program, if any? ____________________________________________
ATTACHMENT H
SELECTING AN ADULT EDUCATION INSTRUCTOR

(SEE SECTION I, ITEM #10, DEVELOPMENT OF WORK SPECIFIC WORKPLACE EDUCATION PROGRAMS)
Selecting An Adult Education Instructor

The following questions were developed by AFL-CIO Human Resources Development Institute (1990). These questions were designed to identify instructors whose teaching approach may support the goals and aims of a workplace education program.

- Are the instructors experienced in teaching basic skills to adults?
- Do they have experience with the non-traditional approach to adult education -- using teaching materials and curricula that are not school based?
- Have they taught in a non-school environment?
- Are they sensitive to employees needs and concerns as learners, including an understanding of skills employees use in their jobs and in their personal lives?
- How well do they know the industry and jobs in which the employees work?
- Are they comfortable using a variety of teaching approaches to meet the learning styles of different individuals?
- Are they aware of and sensitive to cultural differences that may exist among employees?
- Are they flexible and willing to cooperate with the union and/or management in shaping the curriculum?
- Will they approach learners as equals in a collaborative process?
ATTACHMENT I
INSTRUCTOR MANUAL CONTENTS

(THE FOLLOWING ITEMS OUTLINE THE CONTENTS OF AN INSTRUCTOR'S MANUAL. SAMPLES ARE FROM RUSSELL CORPORATION, SPECIAL 353 DEMONSTRATION, A WORK SPECIFIC CURRICULUM PROJECT.)

50
1. Vocabulary Section Introduction

2. Primary Vocabulary Objective

3. Author's Note to Instructor

4. Individualized Education Plan (IEP)

5. Lesson 1 (General Vocabulary)
   a. Basic competency skills
   b. Suggested instruction guideline
   c. Student lessons and worksheets
   d. Work specific dictionary
   e. Readability test (words and definitions)
   f. Lesson answer key
   g. Supplementary materials

6. Lesson 2 (Carding General)
   a. Basic competency skills
   b. Suggested instruction guideline
   c. Student lessons and worksheets
   d. Work specific dictionary
   e. Readability test (words and definitions)
   f. Lesson answer key
   g. Copies of actual work specific materials
   h. Supplementary materials

7. Lesson 3 (Carding Common)
   a. Basic competency skills
   b. Suggested instruction guideline
   c. Student lessons and worksheets
   d. Work specific dictionary
   e. Readability test (words and definitions)
   f. Lesson answer key
   g. Copies of actual work specific materials
   h. Supplementary materials
RUSSELL CORPORATION
INSTRUCTOR MANUAL CONTENTS

8. Lesson 4 (Carding Technical)

a. Basic competency skills
b. Suggested instruction guideline
c. Student lessons and worksheets
d. Work specific dictionary
e. Readability test (words and definitions)
f. Lesson answer key
g. Copies of actual work specific materials
h. Supplementary materials

9. Lesson 5 (Combing)

a. Basic competency skills
b. Suggested instruction guideline
c. Student lessons and worksheets
d. Work specific dictionary
e. Readability test (words and definitions)
f. Lesson answer key
g. Copies of actual work specific materials
h. Supplementary materials

10. Lesson 6 (Drawing)

a. Basic competency skills
b. Suggested instruction guideline
c. Student lessons and worksheets
d. Work specific dictionary
e. Readability test (words and definitions)
f. Lesson answer key
g. Copies of actual work specific materials
h. Supplementary materials

11. Lesson 7 (Roving)

a. Basic competency skills
b. Suggested instruction guideline
c. Student lessons and worksheets
d. Work specific dictionary
e. Readability test (words and definitions)
f. Lesson answer key
g. Copies of actual work specific materials
h. Supplementary materials
12. Lesson 8 (Spinning Common)
   a. Basic competency skills
   b. Suggested instruction guideline
   c. Student lessons and worksheets
   d. Work specific dictionary
   e. Readability test (words and definitions)
   f. Lesson answer key
   g. Copies of actual work specific materials
   h. Supplementary materials

13. Lesson 9 (Winding)
   a. Basic competency skills
   b. Suggested instruction guideline
   c. Student lessons and worksheets
   d. Work specific dictionary
   e. Readability test (words and definitions)
   f. Lesson answer key
   g. Copies of actual work specific materials
   h. Supplementary materials

14. Section Evaluation and Answers

   Distribute a copy of the evaluation to each student after they have completed the 9 vocabulary lessons. Although this evaluation is not a timed instrument it should be completed during normal class hours.

   The section evaluation results should be sent to the following address:

   Sallie D. Averitt, Ed.D.
   Auburn University
   Department of Vocational and Adult Education
   Donahue and Thach
   Auburn University, AL 36849-5529
ATTACHMENT J
INDIVIDUALIZED EDUCATION PLAN (COMPLETED)

*ATTACHMENT J WAS EXPANDED TO INCLUDE THE FOLLOWING ATTACHMENT -- J1
## RUSSELL CORPORATION
### INDIVIDUALIZED EDUCATION PLAN

**NAME**  LED GREEN  

**SOCIAL SECURITY NUMBER**  

**SECTION**  Vocabulary  

**PLANT AND LOCATION**  

<table>
<thead>
<tr>
<th>LESSONS ON VOCABULARY SECTION</th>
<th>DATE STARTED</th>
<th>DATE COMPLETED</th>
<th>% CORRECT/TOTAL</th>
<th>INSTRUCTOR COMMENTS</th>
<th>INITIAL</th>
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<td>9-14-93</td>
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<tr>
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<td>LESSON 9 Winding Vocabulary</td>
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**EVALUATION**  

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<th>Mastery Level</th>
<th>Instructor Recommendation</th>
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<td>11-9-93</td>
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**SURVEY ✔ REVIEW ✔**

55 BEST COPY AVAILABLE
NAME

SOCIAL SECURITY NUMBER ____________________________

SECTION Vocabulary _______________________ LEVEL ________________________

PLANT AND LOCATION ________________________________

<table>
<thead>
<tr>
<th>LESSONS ON VOCABULARY SECTION</th>
<th>DATE STARTED</th>
<th>DATE COMPLETED</th>
<th>% CORRECT/TOTAL</th>
<th>INSTRUCTOR COMMENTS</th>
<th>INITIAL</th>
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<td>LESSON 2</td>
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<td>LESSON 3</td>
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<td>LESSON 5</td>
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<tr>
<td>Combing Vocabulary</td>
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<tr>
<td>LESSON 6</td>
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<td>Drawing Vocabulary</td>
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<td>LESSON 7</td>
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<tr>
<td>Roving Vocabulary</td>
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<td>LESSON 8</td>
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<tr>
<td>Spinning Common Vocabulary</td>
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<tr>
<td>LESSON 9</td>
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<tr>
<td>Winding Vocabulary</td>
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<td>Mastery Level: 80% Standard Correct/Total</td>
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<td>SECTION EVALUATION</td>
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</tbody>
</table>
ATTACHMENT K (29 PAGES)
WORKSHEET SAMPLES

- WORKSHEETS WERE PREPARED FOR RUSSELL CORPORATION -- VOCABULARY SECTION, LESSON I
- THE WORDS AND DEFINITIONS WERE SUPPLIED BY RUSSELL CORPORATION
- REFERENCE - DICTIONARY OF FIBER AND TEXTILE TECHNOLOGY, HOECHST CELANESSE
- BASE FOR CURRICULUM DEVELOPMENT INCLUDED
  1. JOB TASKS ANALYSES, PREPARED BY RUSSELL CORPORATION
  2. ALABAMA ADULT EDUCATION CURRICULUM BASIC SKILLS - SCOPE AND SEQUENCE
     (SEE ATTACHMENT C1)
A WORK SPECIFIC CURRICULUM PROJECT
SPECIAL 353 DEMONSTRATION PROJECT IN ADULT EDUCATION
Alabama State Department of Education
Division of Federal Administrative Services Adult Education Program

Head, Department of Vocational and Adult Education (Project Director - Auburn University)
Jo Smith, Ed.D. (Workplace Curriculum Advisor - Auburn University)
Sallie Averitt, Ed.D. (Workplace Curriculum Specialist - Auburn University)
Becky Dunn, Manager Ed. Services (Work Site Coordinator - Russell Corporation)
PARTICIPANT INFORMATION

A work specific dictionary is located at the end of each lesson. It may be used as a reference.
Circle the words on this page that you do not know how to pronounce. Ask your instructor to help you say the circled words. You may use a dictionary.

1. bobbin lay
2. bobbin stripper
3. break back
4. count
5. doubling
6. grains
7. hank
8. humidity
9. laydown
10. micronaire
11. pneumafil
12. skein
13. strength
14. twisting
A syllable is a word part that is pronounced as a separate sound. There is usually only one vowel sound in each syllable.

**Directions:**
Write the number of syllables beside each word below.

<table>
<thead>
<tr>
<th>Words</th>
<th># of Syllables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. bobbin (bob/bin)</td>
<td>2</td>
</tr>
<tr>
<td>2. stripper</td>
<td></td>
</tr>
<tr>
<td>3. back</td>
<td></td>
</tr>
<tr>
<td>4. count</td>
<td></td>
</tr>
<tr>
<td>5. doubling</td>
<td></td>
</tr>
<tr>
<td>6. grains</td>
<td></td>
</tr>
<tr>
<td>7. hank</td>
<td></td>
</tr>
<tr>
<td>8. humidity</td>
<td></td>
</tr>
<tr>
<td>9. laydown</td>
<td></td>
</tr>
<tr>
<td>10. micronaire</td>
<td></td>
</tr>
<tr>
<td>11. pneumafil</td>
<td></td>
</tr>
<tr>
<td>12. strength</td>
<td></td>
</tr>
<tr>
<td>13. twisting</td>
<td></td>
</tr>
</tbody>
</table>
1. A suffix is a word part that is added to the end of a word. Circle the suffix of the following words.

   stripper  grains  twisting
   doubling  humidity

2. The root word is the simplest form of related words. For example, teach is the root word of teacher, reteach, teaches, and teaching.

   Write the root word of the words listed in number 1.
3. When two words are joined to form a compound word, the spelling of each separate word is kept the same. The two words are joined.

Circle the compound word in the word box.

Word Box

bobbin lay doubling laydown pneumafil

4. Complete the following sentence. You may choose a word from the word box in number 3.

________ is the first process of a yarn plant. This term means a specified amount of baled cotton was uniformly aligned. (Hint: The missing word is a compound word.)
5. Arrange the following words and word phrases in alphabetical order.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>laydown</td>
<td>humidity</td>
</tr>
<tr>
<td>pneumafil</td>
<td>grains</td>
</tr>
<tr>
<td>break back</td>
<td>doubling</td>
</tr>
<tr>
<td>bobbin lay</td>
<td>bobbin stripper</td>
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<tr>
<td></td>
<td>twisting</td>
</tr>
<tr>
<td></td>
<td>skein</td>
</tr>
<tr>
<td></td>
<td>strength</td>
</tr>
<tr>
<td></td>
<td>count</td>
</tr>
<tr>
<td></td>
<td>micronaire</td>
</tr>
<tr>
<td></td>
<td>hank</td>
</tr>
</tbody>
</table>

1. ________  8. ________  
2. ________  9. ________  
3. ________  10. ________ 
4. ________ 11. ________  
5. ________  12. ________ 
6. ________ 13. ________  
7. ________  14. ________
6. **Synonyms** are words that have similar meanings. Examples of synonyms are shown below.

   fair, just       answer, respond
   unhappy, sad    work, job

Circle the two words that are synonyms in the following word box.

**Word Box**

strength  count  break  weakness  humid  collapse

7. **Antonyms** are words with opposite meanings. Examples of antonyms are shown below.

   night, day       open, close
   happy, unhappy   full, empty

Circle the two words that are antonyms in the following word box.

**Word Box**

humid  strength  brake  moisture  break  weakness
8. Homophones are words that are pronounced the same but have different spellings and meanings. Examples of homophones are shown below.

roll, role in, inn
see, sea be, bee

Circle the two words that are homophones in the following word box.

Word Box
brake dry strength weakness break humid

9. Write the missing words. You may choose words from the word box in number 8. (Hint: The missing words are homophones.)

The machine ____________ is a device for slowing down or stopping the machine. This device is often built into the machine. The emergency shutdown switch controls this device.

Employees are allowed a ____________ during the work day. Some employees use this time to drink coffee and eat a snack.
Read each sentence carefully. Then choose the best answer to complete each sentence. Circle the letter of the answer you have chosen.

1. A bobbin stripper is a machine used to _________ waste or empty bobbins.
   - A. eliminate
   - B. remove
   - C. clean
   - D. throw away

2. Doubling is the process of combining _________ strands of sliver, roving, or yarn at once to produce one.
   - A. thick
   - B. five or more
   - C. fifty (50)
   - D. two or more
Read each sentence carefully. Then choose the best answer to complete each sentence. Circle the letter of the answer you have chosen.

3. Bobbin lay or bobbin build is the pattern lined on a ________.
   A. bobbin
   B. cone
   C. bobbin, cone, or tube
   D. tube

4. Seven thousand (7,000) grains equal one ________.
   A. gram
   B. count
   C. pound
   D. yard
Read each sentence carefully. Then choose the best answer to complete each sentence. Circle the letter of the answer you have chosen.

5. One hank equals __________.
   A. 480 yards
   B. 840 feet
   C. 480 feet
   D. 840 yards

6. Micronaire is a relative measurement of __________.
   A. fineness
   B. thickness
   C. length
   D. weight
Read each sentence carefully. Then choose the best answer to complete each sentence. Circle the letter of the answer you have chosen.

7. Pneumafil is a term used to identify _________.
   A. sliver, roving, or yarn
   B. quality fibers
   C. defective fibers
   D. short fibers, trash, and excess fibers

8. Break back is a roving package that consists of ________ sliver.
   A. standard
   B. defective
   C. quality
   D. good
VOCABULARY, SYMBOLS, ABBREVIATIONS, MEANINGS AND PROBLEM SOLVING AT RUSSELL CORPORATION
SCANNING TO GET INFORMATION FAST

Scanning is a useful skill to have. On the job, Russell Corporation employees will often have to scan something to get information quickly.

For example, you may need to get information from a machine manual on a machine part. To find the needed information, would you (a) read the whole manual, (b) read a whole section in the manual or, (c) simply scan to find the information you need?

You don't need to read the whole manual. You can scan it to find the information you need.

Turn to the Work Specific Dictionary at the end of this lesson. Scan the first page and find the abbreviation for grams. Write the abbreviation on the line below.

(Answer) ____________________
ABBREVIATIONS

An abbreviation is a shortened form of a word or phrase. Write the abbreviations for the words below. You may use a standard dictionary, or you may scan the Work Specific Dictionary included at the end of this lesson.

1. pound
2. gram
3. yard
4. ounce
5. inch
6. feet

You may choose your answer from the following abbreviations:

in. ft. rd. mi. lb. oz. m km

g kg mg ml mm yd.
Review the following symbols and meanings. Solve the problems.

1. This symbol (+) means to find the sum of two or more numbers; to add. Find the sum of the following numbers.

\[
\begin{array}{cccccc}
108 & 33 & 432 & 4 & 5,329 \\
+101 & +64 & +345 & +5 & +4,999 \\
\end{array}
\]

2. This symbol (-) means to find the difference between two numbers. Subtraction is the opposite of addition. Find the difference between the following numbers.

\[
\begin{array}{cccccc}
15 & 7 & 59 & 23 & 769 \\
-9 & -5 & -30 & -9 & -685 \\
\end{array}
\]
Review the following symbols and meanings. Solve the problems.

3. This symbol (\( \times \)) means to multiply by. The answer is called the product. Multiplication is a short way to do addition. For example, \( 4 \times 5 \) means 4 times 5 or \( 5 + 5 + 5 + 5 = 20 \). Find the product of the following numbers.

\[
\begin{array}{cccccc}
0 & 6 & 11 & 71 & 173 \\
\times 7 & \times 5 & \times 7 & \times 12 & \times 5 \\
\end{array}
\]

4. This symbol (\( \div \)) means divided by. The answer is called the quotient. Division is the reverse, or opposite, of multiplication. For example, since \( 2 \times 8 = 16 \), you will find by reversing the process that \( 16 \div 8 = 2 \) and \( 16 \div 2 = 8 \). Divide the following numbers.

\[
\begin{align*}
20 \div 5 &= \_\_\_\_\_ \quad 36 \div 6 &= \_\_\_\_\_ \quad 0 \div 5 &= \_\_\_\_\_ \\
32 \div 8 &= \_\_\_\_\_ \quad 210 \div 10 &= \_\_\_\_\_.
\end{align*}
\]
5. This symbol (≈) means approximately equal to.

For example, one ounce (oz.) is approximately equal to (≈) 28.35 grams (g).

\[1 \text{ (oz.)} \times 28.35 \approx 28.35 \text{ (g)}\]

Problem: If one ounce (oz.) ≈ 28.35 grams (g), how many grams would 16 ounces (oz.) equal?

Write you answer below.

(Answer)________________________
Solve the following problems. Use the chart in the box when solving the problems. You may use a calculator. Write your answer on the line provided.

<table>
<thead>
<tr>
<th>WHEN YOU KNOW</th>
<th>MULTIPLY BY</th>
<th>TO FIND</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>feet (ft.)</td>
<td>12</td>
<td>inches (in.)</td>
<td>1 ft. (\times) 12 = 12 in.</td>
</tr>
<tr>
<td>yards (yd.)</td>
<td>3</td>
<td>feet (ft.)</td>
<td>1 yd. (\times) 3 = 3 ft.</td>
</tr>
<tr>
<td>pounds (lb.)</td>
<td>16</td>
<td>ounces (oz.)</td>
<td>1 lb. (\times) 16 = 16 oz.</td>
</tr>
</tbody>
</table>

1. Change 5 pounds to ounces. Your answer is __________.

\[5(\text{lb.}) \times 16 = \text{_____ oz.}\]

2. Change 3 feet to inches. Your answer is __________.

3. Change 6 feet to yards. Your answer is __________.

(Hint: To express an amount in larger units, divide the amount by the number of smaller units; for example, \(6 \div 3 \text{ ft.}\)).
Measurements
Using Metric Units of Mass (Weight)

The basic unit in the metric system is gram. The gram and kilogram are units of mass in the metric system, just as the ounce and pound are in the English system.

<table>
<thead>
<tr>
<th>When you know</th>
<th>Multiply by</th>
<th>To find</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>pounds (lb.)</td>
<td>453.6</td>
<td>grams (g)</td>
<td>1 lb. X 453.6 ≈ 453.6 g</td>
</tr>
<tr>
<td>grams (g)</td>
<td>15.43</td>
<td>grains</td>
<td>1 g X 15.43 ≈ 15.43 grains</td>
</tr>
<tr>
<td>ounces (oz.)</td>
<td>28.35</td>
<td>grams (g)</td>
<td>1 oz. X 28.35 ≈ 28.35 g</td>
</tr>
</tbody>
</table>

See Table 2 - Work Specific Dictionary

Solve the following problems. Write your answer on the line provided.

1. 1 pound ≈ _______ grams
   Note: This symbol (=) means approximately equal to.

2. 16 ounces ≈ _______ grams

3. 453.6 grams ≈ _______ grains

4. 2835 grams ≈ _______ ounces
   (Hint: To express an amount in larger units, divide the amount by the number of smaller units; for example, 2835 ÷ 28.35.)
Mathematics (Symbols and Meanings)

Write what the following symbols mean. Please write your answer in complete sentences.

1. (+) ____________________________

2. (≈) ____________________________

3. (÷) ____________________________
Mathematics (Symbols and Meanings)

Write what the following symbols mean. Please write your answer in complete sentences.

4. \( \times \)

5. \( - \)
GENERAL VOCABULARY REVIEW
Circle the bobbin lay or bobbin build that is used in your department.

JOB TASKS INSTRUCTIONAL MATERIALS
RUSSELL CORPORATION
LESSON 1 - GENERAL VOCABULARY

WORD SCRAMBLE
UNSCRAMBLE THE FOLLOWING GENERAL VOCABULARY WORDS. YOU MAY LOOK BACK AT THE PRECEDING PAGES.

1. NYALWDO
2. KAHN
3. LIMFUNPEA
4. SRGNAI
5. THEGSRNT
Complete the crossword puzzle below. You may use the work specific dictionary located at the end of this lesson.

**ACROSS**
1. Short fibers, trash, and excess fibers
2. The process of combining two or more strands of sliver, roving, or yarn at once to produce one
3. The first process in a yarn plant

**DOWN**
1. A continuous strand of yarn or cord in the form of a collapsed coil
2. Amount of moisture in the air
3. Denotes the yarn number systems
Several of Russell Corporation's general vocabulary words are hidden in the block below. Some of these words are hidden backward or diagonally. See if you can find:

- pneumafil
- humidity
- count
- twisting
- bank
- skein
- grains

d s r y t h a e m b p
o m p n e u m a f i l
u m m k p m o w q c
b n s k e i n t o r
l h o q u d a u k r i
i b a p a i n t o y a
n s g n i t s i w t r
g a p r k y y s p k g
Complete the crossword puzzle below. You may use the work specific dictionary located at the end of this lesson. The word space was included as a separation between two words -- a phrase. The first phrase has been completed for you as an example.

ACROSS
1. The breaking tenacity of fiber, yarn, or similar structure
2. The pattern lined on a bobbin or cone or tube (two words)
3. The first process of a yarn plant (an adequate amount of baled cotton has been uniformly aligned)
4. A relative measurement of fineness
5. Seven thousand _______ equal one pound (lb.)

DOWN
1. A machine used to clean waste bobbins (two words)
2. A roving package that consists of defective sliver (two words)
3. A process that takes the double strands of fiber and makes them uniform
4. One _______ equals 840 yards (yd.)
5. A continuous strand of yarn or cord in the form of a collapsed coil

10/04/93
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THE FOLLOWING SAMPLE OF A SUGGESTED INSTRUCTION GUIDELINE WAS PREPARED FOR RUSSELL CORPORATION -- VOCABULARY SECTION, LESSON 1.

THE INSTRUCTION GUIDELINE IS TO BE USED IN ADDITION TO THE PRECEDING WORKSHEETS.
Lesson 1

Introduction of Concepts

Build on the learners' background experience of workplace vocabulary. Discuss work specific words that the employee is familiar with. Write these words on a board or flipchart. Instruct each student to keep a vocabulary notebook of the words and meanings discussed.

Instruct the students to write a paragraph on why it is important to know work specific words. Review how to write a paragraph; for example, state the topic of the paragraph in one sentence. This is called the topic sentence. This sentence may be written at the beginning, middle, or end of the paragraph. The other sentences of the paragraph are called supporting details. (Reference: Writing Skills, Part Two - The Essay, Steck-Vaughn)

Direct Instruction

Instruct students on how to use a dictionary. Use the work specific words; e.g., count, grains, strength, twisting, etc. Reference review: Steck-Vaughn, Writing For Success (Pre-GED), pp. 115-117.

Briefly review the words included in the Work Specific dictionary located at the end of Lesson I. Instruct the students to circle the words they are not familiar with -- or cannot pronounce. This exercise may be referenced as the students continue through the lessons. The circled words should be a teaching focal point for the instructor.

Practice Exercises

Exercise #1 (Group)

Divide the students into small groups. Instruct each group to select a group leader. The group leader will write a list of the words (page 2 - student book) that the group can pronounce. Each leader will read the words aloud.

Exercise #2 (Group)

Instruct each group leader to write on the board the words the group could not pronounce. The instructor will read these words aloud. Ask the students to say the words as a group -- in unison. Next, ask each student to pronounce the words; help them if necessary.
RUSSELL CORPORATION
SUGGESTED INSTRUCTION GUIDELINE

Lesson 1

Practice Exercises
Exercise #3 (Group)
Instruct each group to select another group leader. The group leader will write the first five words on a sheet of paper. Then, the group will discuss what the words mean. The group leader will write the definitions, agreed on by the group, next to the words.

Select one group leader to read the words and definitions aloud while the instructor writes them on the board. These definitions will be revised until a consensus is reached by all groups.

*Repeat this exercise for the remaining words.

Exercise #4 (Group)
Discuss the vocabulary words as they relate to the employees' jobs. Instruct each student to choose a word from the list that they are least familiar with. The student will be instructed to research the word meaning. The following items might be included in the word research:

1. Why is it important for me to know this word?
2. Is this a common word or a technical word? Explain the difference.
3. Use the word in a work related sentence.
4. When would I use this word? Under what circumstances would I use this word?
5. If the term is an object, ask the student to explain and show the actual object -- if possible.
6. Include a sketch or picture in the research.

Exercise #5 (Individual and Group)
Ask each student to select and write down on a piece of paper the most difficult word. The teacher will make a plan to teach this word to the student on an individual basis and as a group. For example, the teacher will use the word during instruction, write a sentence using the word and ask the student to fill in the blank, play scrabble using the vocabulary words, word puzzles (try and find), etc.
Lesson 1

Practice Exercises

Exercise #6 (Group)
Explain the relationships between the problems on page 19 -- student book. The following box shows one such relationship.

*1 lb. = 453.6 g*

*16 oz. = 1 lb.*

*16 oz. = (16 X 28.35) 453.6 g*

Discuss, as a group, other measurement relationships. Encourage students to work together when solving problem #4 on page 19 -- student book.

Exercise #7 (Individual)
Ask the students to turn to page 32 of the student book. Instruct them to circle the bobbin lay or build that they work with.

Answer: Coosa Ring Plant (Hosiery Cone)

Exercise #8 (Group)
The students have been instructed to write in complete sentences on page 20-21, student book. Review the following areas:

1. capitalization rules
2. punctuation marks
3. sentence structure

Ask the group to name the capitalization rules. Write these rules on the board.

Ask the group to name the four punctuation marks that are used more often than some of the others.

Ask the group to write a definition of a sentence, a sentence fragment, and a run-on sentence.
Lesson 1

Practice Exercises
Exercise #9 (Group)
Review the four kinds of sentences and sentence parts. Include the following information in the review.

The four kinds of sentences are:
1. A sentence that makes a statement is a declarative sentence.
2. A sentence that gives a command or makes a request is an imperative sentence.
3. A sentence that asks a question is an interrogative sentence.
4. A sentence that expresses strong feeling is an exclamatory sentence.

Sentence parts include a (a) subject (names the person or thing about which you are speaking or writing), (b) predicate (the part that says something about the subject), and (c) verb (a word that expresses action or otherwise helps to make a statement).

Ask the students to give an example of each kind of sentence.

Instruct the students to write an example of each kind and label the sentence parts.
Lesson 1

Practice Exercises
Exercise #10
Discuss how to use a calculator. The following information will guide the students through a brief review.

Important Keys

- On and Clear
- % per cent
- Square root (not divide)
- Times (Multiply)
- Divided By
- Minus (Subtract)
- Plus (Add)
- Decimal point
- Equals
Lesson 1

Practice Exercises (continued)
Exercise #10
Discuss how to use a calculator. The following information will guide the students through a brief review.

Using your Calculator

Some things to remember:
1. Always touch the C (for clear) key before beginning each new operation.
2. Always check the print out window after each entry to see that you have entered the correct numbers.
3. Just touch each entry and release. Do not hold a key down.
4. Concentrate on keying in the correct operation for the problem you are solving.
5. If you are adding a column of figures, double check by adding from the bottom up after getting the sum from the top down.
6. Work each calculation a second time to check your answer.
7. Round accurately.
8. Be careful that decimal points are keyed into your calculator when indicated.

Remember: The calculator can only give correct answers if the correct information is keyed into it.
Lesson 1

Practice Exercises
Exercise #10 (continued)

Ask a student to demonstrate how to solve the following problems on a calculator:

\[.34 + .57 = \underline{\text{_____}}\]

\[45.3 - .19 = \underline{\text{_____}}\]

Ask another student to demonstrate how to solve the following problems on a calculator:

\[.23 \times 1.5 = \underline{\text{_____}}\]

\[4.4 \div .2 = \underline{\text{_____}}\]

*Continue to practice using the calculator until the students feel competent.*


Philippi, Jorie W. (1993). *Retraining the workforce (Meeting the global challenge).* Dallas, TX: R. Jan LeCroy Center for Educational Telecommunications, Dallas County Community College District. (Text and Videotapes are available from Auburn University Literacy Resource Center)


DISPELLING COMMON EMPLOYER ARGUMENTS AGAINST
ESTABLISHING A WORKPLACE LITERACY TRAINING PROGRAM

1. “I hire only qualified applicants to begin with, so why should I have any concerns?”

Your personnel department may do all it can to hire the best qualified applicants, however, today’s workers may not come equipped with all the basic skills necessary to be the most productive worker. The baby boom of but a few short years ago that produced a more than ample supply of new workers for America’s industries has gone bust and the available labor pool is simply much smaller. More and more businesses will need to search out workers with highly varied skill and ability levels. We speak a lot today about diversity in the workplace. Part of this diversity will include individuals with low skills who will need training in order to become productive employees.

2. “Well, if we have problems, we’ll simply dismiss any employee who doesn’t have the necessary skills to be productive.”

If you fire the employee who isn’t productive due to a lack of basic skills, you may only end up replacing the individual with someone with even lower skills. However, if you train the employee who has low basic skills, you will develop a worker who will not only be more productive but probably better motivated. You will also avoid needless legal battles when employees feel they have been discriminated under Title VII of the Civil Rights Act of 1964.

3. “Schools should have responsibility for teaching basic skills, not businesses.”

Granted, schools must do a better job in preparing young people before they complete their formal education. Today there are a number of reforms intending to improve public education’s capacity to develop adequate basic skill levels among all young people leaving school. This will take considerable time, however. The immediate question is what are we going to do in the meantime? Currently, three-quarters of the young people who will be working in the year 2000 are already out of school. Most of them are in the workforce and it is there that they and employers will be confronted with low basic skills. The existing adult education system is small by comparison and simply cannot respond to all the changing skill needs of workers in the workplace. Employers, in cooperation with unions, workers, and adult education programs must form partnerships to respond to the basic skills needs of present workers.

4. “Our business only require people with low skills, it’s just not necessary for new workers to know how to read and write well.”

Jobs today are becoming more complex rather than less complex. Increasing complexity means that workers will need higher and higher basic skill levels to perform their jobs. Even entry level positions are requiring that new workers come equipped with higher reading, writing, computational, communications, problem solving and reasoning abilities.

5. “If I give them training, they’ll only leave me and go to another company.”

This may happen, but what’s keeping them there now? If you give them the training and improve the chances of being promoted in your business, don’t you think that they may feel more loyalty and be better motivated than they are now? Also think about the productivity lost when workers can’t adequately perform their jobs. Basic skills training is increasingly becoming a bottom line issue.

6. “I don’t want to embarrass my employees by telling them that they need to improve the basic skills.”

Then don’t! Just get them involved in discussions about your concerns and begin the process of planning a program. After all, most workers know how weak their skills are and one of their fears is that you will find out and fire them. Show them that you want to see them improve their basic skills because they are valued employees in the company. Assure them that the workplace literacy program is not in any way intended to dismiss workers from their current positions. Make sure you present to them opportunities to become involved in all levels of program planning and implementation.

7. “Training costs a lot of money and time.”

Yes, training costs some money and it costs you some time. But what does it cost to replace a worker every time they voluntarily leave or you dismiss them? If you had a chance to buy a new machine that would make your company more productive, would you buy it? Training is an investment in the future. By getting union representatives, workers, and adult education professionals involved, opportunities to have each partner share in the total cost of workplace literacy training can be created. There are good reasons why unions, workers, and adult education professionals want to get involved with you. Each has a stake in ensuring that your company has a productive workforce.