A demonstration project was conducted in Alabama to create a basic skills workplace curriculum that would assist a local corporation in improving work force productivity. During the 3-year project, a job-specific curriculum was written for Russell Corporation’s Skills Training at Russell (STAR) program. The curriculum covered four topics: safety, vocabulary and forms, statistical process control, and teamwork. An adult education supervisor’s handbook was also developed during the project. Results of a summative evaluation on the safety section of the curriculum showed the following: 83 percent of the participants achieved at least 80 percent mastery of the developed materials; approximately 70 percent stated that their attitude toward safety changed as a result of the program, and 85 percent agreed that they were more aware of safety signs, rules, and procedures. Recommendations were made to train a Russell Corporation employee to write and upgrade the curriculum and to train other workplace education specialists. (This document includes the adult education supervisor’s handbook, curriculum samples from the safety and vocabulary and forms sections, and workplace education practicum samples.) (KC)
A WORK SPECIFIC CURRICULUM PROJECT
SPECIAL 353 DEMONSTRATION PROJECT
IN ADULT EDUCATION

Submitted by Paula S. Smith

Alabama State Department of Education
Division of Student Instructional Services
Adult Education Program

Alabama State Department of Education
Auburn University - Department of Vocational and Adult Education
Russell Corporation - Alexander City, Alabama

James Bob Drake, Ed.D. (Project Director - Auburn University)
Jo Smith, Ed.D. (Workplace Curriculum Advisor - Auburn University)
Sallie Averitt, Ed.D. (Workplace Curriculum Specialist - Auburn University)
Paula S. Smith, M.Ed. (Workplace Curriculum Specialist - Auburn University)
Becky Dunn, Manager Ed. Services (Work Site Coordinator - Russell Corporation)
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   (developed during year 2)

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   (developed during year 3)
Final Report

Work Specific Curriculum Project
July 1, 1992 through June 30, 1995

Title of Project: A Work Specific Curriculum Project

Grant Period: 07/01/92 - 06/30/95
07/01/92 - 06/30/93 (year 1)
07/01/94 - 03/30/94 (year 2)
10/01/94 - 06/30/95 (year 3)

Grant Amount: $52,235
$14,705 (year 1)
$18,000 (year 2)
$19,530 (year 3)

Submitted by: Paula S. Smith, M.Ed.
Auburn University
Department of Vocational and Adult Education
Donahue and Thach
Auburn University, AL 36849-5529
(334) 844-3817

Approved by: James Bob Drake, Ed.D.
Project Director

James Bob Drake, Ed.D.
**Project Description**

The 353 project was funded by the Alabama State Department of Education, Adult Education Program to the Auburn University, Vocational and Adult Education department. The goal of the project was to create a basic skills workplace curriculum that would assist Russell Corporation in improving workforce productivity.

**Project Outcomes**

A job specific curriculum was written for Russell Corporation’s Skills Training at Russell (STAR) program. The structure of the curriculum was modified during the third year of the grant. Originally, the curriculum was to be divided into five sections: safety, vocabulary, forms, statistical process control, and teamwork. To facilitate a logical work-related break in the curriculum, the decision was made to combine the vocabulary and forms sections. Five lessons in the vocabulary and forms section were written during the last year of the grant. Additionally, a vocabulary and forms section posttest was developed; however, the posttest was not administered because the vocabulary and forms section was not completed by the end of the grant period.

The Adult Education Supervisor’s Handbook was developed during this grant. The handbook was designed as a practical guide to the development of workplace literacy programs.

Section D of this report details the technical assistance and staff development activities that were provided during the grant. Sections I and J contain sample job specific curriculum written by practicum participants.
Conclusions

The results of a summative evaluation (on the safety section) were:

- 83.01% of the participants achieved at least an 80% mastery of the developed materials
- 69.81% stated their attitude toward safety changed as a result of the program
- 84.91% agreed that they were more aware of safety signs, rules, and procedures

Throughout the grant, technical assistance was provided to Russell Corporation and seven other organizations (See Section D of this report).

Two workplace literacy practicums were offered through Auburn University. The first practicum was offered during Winter Quarter 1994, the second was offered during Summer Quarter 1994. Participants were instructed in curriculum development (See Sections I and J of this report).
Recommendations

○ Train a Russell Corporation employee to write and update the curriculum.

○ Train workplace education teachers to use the job specific curriculum most effectively.

○ Develop a credit course, or courses, on workplace education at Auburn University, Department of Vocational and Adult Education.

○ Train and utilize other workplace education specialists.

Description of Products

○ Formative Evaluation Report
○ Adult Education Supervisor’s Handbook
○ Work Specific Curriculum (student books)
○ Work Specific Curriculum (instructor’s manuals)

Products Available from

○ Alabama State Department of Education
○ Alabama Adult Literacy Resource Center
○ ERIC
Progress by Objectives and Russell Summary Letter
July 17, 1995

James Bob Drake, Ed.D.
Professor and Department Head
Vocational and Adult Education
Donahue and Thach
Auburn University, Alabama 36849-5529

Dear Dr. Drake:

Through the past 353 Grants, we have made tremendous strides in our efforts to place job specific adult education materials in our classes. The last report we received on June 30, continues to show the impact the project has on our employees. The value and importance of the materials is apparent not only to management, but also to the employees. As the lessons continue to be written, the skills of Paula Smith and the direction of Dr. Jo Smith are reflected in their work. Plant management has been cooperative in this project in assisting them and they realize the value to the Company of this project.

This project has also reinforced our philosophy that education and business must continue to work together to benefit each other. We certainly must have one of the best partnerships in Alabama. We hope to continue our partnership in other grants with Auburn University. We appreciate your support in the education process of Russell Corporation employees.

Sincerely,

Dick Dickson
Vice-President Human Resources

c: Becky Dunn
Progress by Objectives

Objective 1

Create a workplace education model specifically designed to serve Russell Corporation employees.

The workplace literacy model was designed in the first year of the grant to include five sections: safety, vocabulary, forms, statistical process control, and teamwork. During the third year of the grant the model was modified to incorporate the vocabulary and forms sections. The final model consists of four sections. The sections are:

Workplace Education Curriculum Model
Developed for Russell Corporation

★ Safety (section completed during years 1 and 2)

★ Vocabulary and Forms (7 of 10 lessons completed)

★ Statistical Process Control

★ Teamwork
Seven of the ten lessons in the vocabulary and forms section are complete. Russell Corporation has approved four of the lessons and is in the process of reviewing the other three. The ten lessons in the vocabulary and forms section are listed below:

☆ General Vocabulary
(student book and instructor manual - approved & completed during year 2)

☆ Carding General Vocabulary
(student book and instructor manual - approved & completed during year 2)

☆ Carding Common Vocabulary
(student book and instructor manual - approved & completed during year 3)

☆ Carding Technical Vocabulary
(student book and instructor manual - approved & completed during year 3)

☆ Carding Forms
(student book and instructor manual - completed during year 3 submitted to Russell Corporation for approval)

☆ Combing Vocabulary and Forms
(student book and instructor manual - completed during year 3 submitted to Russell Corporation for approval)

☆ Drawing Vocabulary and Forms
(student book and instructor manual - completed during year 3 submitted to Russell Corporation for approval)

☆ Roving Vocabulary and Forms

☆ Spinning Vocabulary and Forms

☆ Winding Vocabulary and Forms
Objective 2

Use the developed education model as part of the Alabama Adult Education Curriculum to be disseminated for use in promoting workplace education.

Disseminated in the following ways during year two:

★ Presentation at the Regional Adult Education/Literacy Conference, Birmingham, Alabama (July 1993)

★ Distribution of approved safety curriculum

<table>
<thead>
<tr>
<th>Name of Entity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama State Department of Education</td>
<td>Montgomery, AL</td>
</tr>
<tr>
<td>Enterprise State Junior College</td>
<td>Enterprise, AL</td>
</tr>
<tr>
<td>Workplace Resource Center</td>
<td>Greenville, SC</td>
</tr>
<tr>
<td>O'Neal Steel</td>
<td>Birmingham, AL</td>
</tr>
<tr>
<td>ERIC (Educational Resource Information Center)</td>
<td></td>
</tr>
</tbody>
</table>

★ Technical assistance in workplace education
(See Section D of this report)

★ The Adult Education Supervisor’s Handbook was designed. This handbook was developed as a training package for adult educators. (See Section E of this report)

★ A workplace education practicum was offered at Auburn University during Winter Quarter 1994.
(See Sections D, I and J of this report)
Objective 2 (continued)

Use the developed education model as part of the Alabama Adult Education Curriculum to be disseminated for use in promoting workplace education.

Disseminated in the following ways during year three:

★ Presentation at Auburn University’s Workplace Literacy teleconference, Auburn University, Alabama (April 1995)

★ Presentation at the State Adult Education Conference, Birmingham, Alabama (June 1995)

★ Approved curriculum submitted to ERIC

★ Curriculum and final report submitted to Alabama State Department of Education

★ Curriculum and final report submitted to Alabama Adult Literacy Resource Center
Objective 3
Design posttest to measure job specific curriculum effectiveness.

Year Two

★ A safety section evaluation was designed and administered. (See Section B of this report).

★ A formative evaluation report was compiled and submitted to the Alabama State Department of Education. (See Section C of this report)

Year Three

★ A formative evaluation and a summative evaluation were compiled and included in the project’s final report. (See Section C of this report)

★ A vocabulary and forms section evaluation was designed (See Section B of this report). The posttest was not administered because the vocabulary and forms section was not completed by the end of the grant period.
Objective 4 (for years 1 and 2)

Increase employee workplace posttest scores.

★ 71.9% of the participants achieved at least an 80% mastery on the Safety Section (See Section C of this report).

★ A formative evaluation report was compiled and submitted to the Alabama State Department of Education. (See Section C of this report)

Objective 4 (for year 3)

Verify the impact of the job specific curriculum through supervisor and employee surveys.

★ Supervisor and employee surveys for the vocabulary and forms sections were not administered because the vocabulary and forms section was not completed by the end of the grant period.

★ Employees are continued to be surveyed upon completion of the safety section.
Objective 5 (for years 1 and 2)

Verify impact of job specific curriculum

Year Two

★ A safety section evaluation was designed and administered. (See Section B of this report)

★ A formative evaluation report was compiled and submitted to the Alabama State Department of Education. (See Section C of this report)

Objective 5 (for year 3)

Provide staff development upon request

Year Three

★ Visited Russell Corporation's Habbersham Plant (Habersham, Georgia) to assist the teacher in implementing the STAR program (See Section D of this report).

★ Presentation at the State Adult Education Conference, Birmingham, Alabama (June 1995)

★ A workplace education practicum was offered at Auburn University during Summer Quarter 1994. (See Sections D, I, and J of this report)
Section Posttests
Directions:
Circled the letter of the best answer.

1. Your body's defense against loud noise is:
   A. a limited hearing loss.
   B. deafness.
   C. a decreased attention span.
   D. a headache.

2. Safety rules at work include all the following except:
   A. Do not wear loose clothing.
   B. Long hair must be protected.
   C. Tools must be carried in shirt pockets.
   D. Ties should not be worn.

3. To practice good housekeeping at work you need to:
   A. stack cartons, furniture, or equipment in aisles away from the machine.
   B. report electrical equipment that has damaged wiring.
   C. leave file drawers open where others might use the contents.
   D. tell someone to wipe up spills or pick up trash.
4. Circle the symbol that means a visual inspection is needed.

A. △ →
B. !
C. ←
D. △

5. Circle the symbol that means there could be machine damage if operating rules are not followed.

A. ☒
B. X
C. STOP
D. O.K.

6. Circle the symbol that means an incorrect usage or setting.

A. STOP
B. X
C. O.K.
D. !

7. Circle the symbol that means the machine, assembly, or part must be idle.

A. X
B. STOP
C. O.K.
D. STOP
8. The main switch on your machine must be:
   A. turned on before making adjustments.
   B. turned off before making adjustments.
   C. turned to the idle position before adjustments are made.
   D. turned off and secured before adjustments are made.

9. The emergency shutdown switch is pressed when:
   A. employees are making adjustments.
   B. the first shift ends.
   C. there is a serious situation requiring prompt action.
   D. the second shift ends.

10. Machine covers that are screwed on may be removed when:
    A. the machine is running.
    B. the machine is not running.
    C. no one else is around the machine.
    D. the main switch is off and secured.
JOB TASKS INSTRUCTIONAL MATERIALS
RUSSELL CORPORATION
COOSA RING PLANT - CARDING DEPARTMENT

Directions:
Circle the letter of the best answer.

11. Which one of the following safety rules is not true when working with or around compressed air?

A. Roll up and secure air hoses after use.
B. Do not turn off the air control valve after you use compressed air.
C. Do not clean your clothes or your body with compressed air.
D. Report damaged or leaking air hoses, valves, guns, or nozzles to your supervisor.

12. Compressed air is:

A. stored energy.
B. not used in cleaning and "blow-down" of equipment.
C. safe and should not be taken seriously.
D. used to clean clothing.
The posttest for the Vocabulary and Forms section is still in progress. It will be lengthened/revised as additional lessons are written.
Directions  Circle the letter of the best answer.

1. The word **align** means:
   a. to be similar
   b. to line up
   c. to be at the back of a line
   d. to pull

2. The word **prevent** means:
   a. to keep something from happening
   b. to do things at the same time
   c. to clean
   d. to repair

3. On a flow chart:
   a. the beginning and ending steps are inside circles and the middle steps are inside diamonds.
   b. the beginning and ending steps are inside rectangles and the middle steps are inside circles.
   c. the beginning and ending steps are inside circles and the middle steps are inside rectangles.
   d. the beginning and ending steps are inside diamonds and the middle steps are inside circles.
Use the information below to label the parts of the carding machine. Label these parts: **cylinder, flats, chute, doffer, coiler head**

1. **The chute** forms even fibers into and even mat. The mat is fed into the carding machine.
2. The feed roll is the first roll to meet the cotton.
3. The licker-in takes small pieces of fiber from the feed roll. It puts the fiber on the cylinder.
4. Flats are located over the cylinder. Flats help to align and clean the fibers.
5. The cylinder is a large cast iron shell that rotates very fast.
6. The doffer is next to the cylinder. Its main job is to pull cotton off the cylinder.
7. The coiler head puts sliver into a can.
9. The words below share a common trait. Circle the letter of the word that does not belong.
   a. doffer
   b. licker-in
   c. cylinder
   d. micronaire

10. 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 below.
   a. bobbin lay
   b. doubling
   c. pneumafil
   d. laydown

Write the abbreviation for each word in the blank.

11. pound
12. feet
13. yard
14. gram
Participant Job Specific Curriculum Survey, Formative Evaluation, and Summative Evaluation
PARTICIPANT JOB SPECIFIC CURRICULUM SURVEY
COOSA RING SPINNING – SAFETY SECTION
TEACHER - VICKI SPRAGGINS
AUGUST, 1993

Please rate each statement below.
Circle the number that best describes your opinion of the safety materials used in this class.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree</th>
<th>No Opinion</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The safety section materials were interesting.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The safety materials were too easy.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The safety materials were too difficult.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The safety materials were easy to understand.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The safety materials gave me new safety information.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. The materials served as a good review of safety information at Russell Corporation.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. The safety section will be a good program for new employees.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. My teacher was interested in helping me learn more.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. My teacher encouraged me to participate in class.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Planned class instruction prevented time from being wasted.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. The safety information was useful to me on my job.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I feel I have improved my reading skills since starting this section.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I feel I have improved my writing skills since starting this section.</td>
<td>1 2 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Has your attitude toward safety changed since being in this program? __________

Are you more aware of safety signs, rules, and procedures since being in this program? __________

What would you change about this program if you could? ________________________________________

________________________________________________________________________________________
FORMATIVE EVALUATION
SPECIAL 353 DEMONSTRATION PROJECT IN ADULT EDUCATION
WORK SPECIFIC CURRICULUM PROJECT — RUSSELL CORPORATION

Introduction
Russell Corporation completed the first phase of instruction using the safety section of the work specific curriculum. A formative evaluation was conducted using a section evaluation (posttest) and a participant job specific curriculum survey.

Sample Selection
Data were collected from 32 participants at Russell Corporation, Alexander City, Alabama.

Data Collection
The data were collected from August 1993 through November 1993.

Descriptive Statistics
Data in Table 1 (section evaluation — posttest) indicated that 71.9% of the participants achieved at least an 80% mastery of the materials. Mastery was determined by the number correct. Since there were 12 possible points, the participants achieved mastery by answering 10 or more questions correctly.

Table 1
A Summary of Participants Achieving Eighty Percent Mastery
Safety Section Evaluation (Posttest)

<table>
<thead>
<tr>
<th>Number Correct</th>
<th>Frequency Participants = 32</th>
<th>Percent</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>3.1</td>
<td>3.1</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>3.1</td>
<td>6.3</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>6.3</td>
<td>12.5</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
<td>15.6</td>
<td>28.1</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>31.3</td>
<td>59.4</td>
</tr>
<tr>
<td>11</td>
<td>5</td>
<td>15.6</td>
<td>75.0</td>
</tr>
<tr>
<td>12</td>
<td>8</td>
<td>25.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Data in Table 2 (participant job specific curriculum surveys) indicated that 84.4% of the participants increased their awareness of safety signs, rules, and procedures. In addition, 68.8% of the participants experienced a change in attitude about workplace safety.

Table 2
A Summary of Participant Responses
Participant Job Specific Curriculum Surveys (Safety Section)

<table>
<thead>
<tr>
<th>Survey Questions</th>
<th>Yes (percentage)</th>
<th>No (percentage)</th>
<th>No Opinion (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are you more aware of safety signs, rules, and procedures since being in this program?</td>
<td>84.4</td>
<td>6.3</td>
<td>9.3</td>
</tr>
<tr>
<td>2. Has your attitude toward safety changed since being in this program?</td>
<td>68.8</td>
<td>15.6</td>
<td>15.6</td>
</tr>
</tbody>
</table>
Descriptive Statistics (continued)

Data in Table 3 (question 8) indicated that 84.4 percent of the participants agreed the safety information was useful to them on their jobs. Other significant findings were:

- **Question 6**
  81.3% of the participants agreed the materials provided a good review of safety information

- **Question 7**
  87.5% agreed that the safety section would benefit new employees

- **Questions 9 & 10**
  > 50% of the participants reported they improved their reading and writing skills

Table 3
A Summary of Participant Responses
Participant Job Specific Curriculum Survey (Safety Section)

<table>
<thead>
<tr>
<th>Survey Questions</th>
<th>Agree (percentage)</th>
<th>No Opinion (percentage)</th>
<th>Disagree (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The safety section materials were interesting.</td>
<td>78.1</td>
<td>21.9</td>
<td>.0</td>
</tr>
<tr>
<td>2. The safety materials were too easy.</td>
<td>25.0</td>
<td>37.5</td>
<td>37.5</td>
</tr>
<tr>
<td>3. The safety materials were too difficult.</td>
<td>6.3</td>
<td>28.1</td>
<td>65.6</td>
</tr>
<tr>
<td>4. The materials were easy to understand.</td>
<td>65.6</td>
<td>18.8</td>
<td>15.6</td>
</tr>
<tr>
<td>5. The materials gave me new safety information.</td>
<td>71.9</td>
<td>12.5</td>
<td>15.6</td>
</tr>
<tr>
<td>6. The materials served as a good review of safety information.</td>
<td>81.3</td>
<td>15.6</td>
<td>3.1</td>
</tr>
<tr>
<td>7. The safety section will be a good program for new employees.</td>
<td>87.5</td>
<td>9.4</td>
<td>3.1</td>
</tr>
<tr>
<td>8. The safety information was useful to me on my job.</td>
<td>84.4</td>
<td>15.6</td>
<td>.0</td>
</tr>
<tr>
<td>9. I feel I have improved my reading skills since starting this section.</td>
<td>59.4</td>
<td>31.3</td>
<td>9.4</td>
</tr>
<tr>
<td>10. I feel I have improved my writing skills since starting this section.</td>
<td>53.1</td>
<td>31.3</td>
<td>15.6</td>
</tr>
</tbody>
</table>
Formative Evaluation -- Comments on Safety Section

Comment #1
The statistical results of the section evaluation (posttest) were encouraging. The majority (71.9 percent) of participants achieved an 80 percent mastery of the safety section materials.

Comment #2
The results of the participant job specific curriculum surveys were significant in the evaluation of the safety section. It appears that the safety curriculum made a difference in the knowledge base and awareness of Russell Corporation employees. (See Tables 3 and 4)

Comment #3
Participants who did not accomplish an 80 percent mastery may need to review the safety section. (See Recommendation #2)

Formative Evaluation -- Recommendations on Safety Section

Recommendation #1
New employees should participate in the safety section -- 87.5 percent of the participants agreed with this recommendation.

Recommendation #2
The safety section should be used periodically as a review of safety information at Russell Corporation -- 81.3 percent of the participants agreed the materials provided a good review of workplace safety.

Recommendation #3
The safety curriculum should be kept current. An employee at Russell Corporation should be trained and responsible for this task.
Work Specific Curriculum Project

Formative Evaluation on Safety Section

Report Submitted by Paula S. Smith, M.Ed.
Department of Vocational and Adult Education
Auburn University, Alabama
June 30, 1995
Introduction
This evaluation reports statistics on the second group of participants to complete the safety section in the Skills Training at Russell (STAR) program.

Sample Selection
Data were collected from 21 participants at Russell Corporation, Alexander City, Alabama.

Data Collection
Data were collected during March 1995.

Descriptive Statistics
Data in Table 1 (section evaluation - posttest) indicates that 100% of the participants achieved at least an 80% mastery of the safety section materials. Mastery was determined by the number of questions answered correctly. There were a total of 12 questions, therefore mastery was achieved by answering 10 or more questions correctly.

Table 1
A Summary of Participants Achieving Eighty Percent Mastery
Safety Section Evaluation (Posttest)

<table>
<thead>
<tr>
<th>Number Correct Possible Points = 12</th>
<th>Frequency Participants = 21</th>
<th>Percent</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>6</td>
<td>28.57</td>
<td>28.57</td>
</tr>
<tr>
<td>11</td>
<td>5</td>
<td>23.81</td>
<td>52.38</td>
</tr>
<tr>
<td>12</td>
<td>10</td>
<td>47.62</td>
<td>100.00</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>
Descriptive Statistics
Data in Table 2 (participant job specific curriculum surveys) indicated that 71.43 percent of the participants experienced a change in their attitude toward workplace safety. Additionally, 85.72 percent of the participants felt an increased awareness of safety signs, rules, and procedures.

Table 2
A Summary of Participant Responses
Participant Job Specific Curriculum Surveys (Safety Section)

<table>
<thead>
<tr>
<th>Survey Questions</th>
<th>Yes (percentage)</th>
<th>No (percentage)</th>
<th>No Opinion (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has your attitude toward safety changed since being in the program.</td>
<td>71.43</td>
<td>14.285</td>
<td>14.285</td>
</tr>
<tr>
<td>2. Are you more aware of safety signs, rules, and procedures since being in this program?</td>
<td>85.72</td>
<td>4.76</td>
<td>9.52</td>
</tr>
</tbody>
</table>
Formative Evaluation
Special 353 Demonstration Project in Adult Education
Work Specific Curriculum Project - Russell Corporation

Descriptive Statistics
Data in Table 3 (question 11) indicated that 95.24 percent of the participants agreed the safety information was useful to them on their jobs. Other findings are summarized below.

Table 3
A Summary of Participant Responses
Participant Job Specific Curriculum Surveys (Safety Section)

<table>
<thead>
<tr>
<th>Survey Questions</th>
<th>Disagree (percentage)</th>
<th>No Opinion (percentage)</th>
<th>Agree (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The safety section materials were interesting.</td>
<td>4.76</td>
<td>19.05</td>
<td>76.19</td>
</tr>
<tr>
<td>2. The safety materials were too easy.</td>
<td>47.62</td>
<td>47.62</td>
<td>4.76</td>
</tr>
<tr>
<td>3. The safety materials were too difficult.</td>
<td>47.62</td>
<td>42.86</td>
<td>9.52</td>
</tr>
<tr>
<td>4. The safety materials were easy to understand.</td>
<td>4.76</td>
<td>4.76</td>
<td>90.48</td>
</tr>
<tr>
<td>5. The safety materials gave me new safety information.</td>
<td>14.29</td>
<td>9.52</td>
<td>76.19</td>
</tr>
<tr>
<td>6. The materials served as a good review of safety information at Russell Corporation.</td>
<td>4.76</td>
<td>4.76</td>
<td>90.48</td>
</tr>
<tr>
<td>7. The safety section will be a good program for new employees.</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>8. My teacher was interested in helping me learn more.</td>
<td>0</td>
<td>4.76</td>
<td>95.24</td>
</tr>
<tr>
<td>9. My teacher encouraged me to participate in class.</td>
<td>0</td>
<td>9.52</td>
<td>90.48</td>
</tr>
<tr>
<td>10. Planned class instruction prevented time from being wasted.</td>
<td>0</td>
<td>14.29</td>
<td>85.71</td>
</tr>
<tr>
<td>11. The safety information was useful to me on my job.</td>
<td>0</td>
<td>4.76</td>
<td>95.24</td>
</tr>
<tr>
<td>12. I feel I have improved my reading skills since starting this section.</td>
<td>14.29</td>
<td>57.14</td>
<td>28.57</td>
</tr>
<tr>
<td>13. I feel I have improved my writing skills since starting this section.</td>
<td>19.05</td>
<td>61.9</td>
<td>19.05</td>
</tr>
</tbody>
</table>
Formative Evaluation
Special 353 Demonstration Project in Adult Education
Work Specific Curriculum Project - Russell Corporation

Formative Evaluation -- Comments on Safety Section

Comment #1
The statistical results of the section evaluation (posttest) were remarkable. One hundred percent of participants achieved an 80 percent mastery of the safety section materials.

Comment #2
The statistical results of the participant job specific curriculum survey indicate the safety curriculum made a difference in the knowledge base and awareness of Russell Corporation employees. (See Tables 3 and 4)

Formative Evaluation -- Recommendations on Safety Section

Recommendation #1
New employees should participate in the safety section -- 100 percent of the participants agreed with this recommendation.

Recommendation #2
The safety section should be used periodically as a review of safety information at Russell Corporation -- 90.48 percent of the participants agreed with this recommendation.

Recommendation #3
The safety section should be updated regularly. An employee at Russell Corporation should be trained and held responsible for this task.
Work Specific Curriculum Project

Summative Evaluation on Safety Section

Report Submitted by Paula S. Smith, M.Ed.
Department of Vocational and Adult Education
Auburn University, Alabama
June 30, 1995
Summative Evaluation
Special 353 Demonstration Project in Adult Education
Work Specific Curriculum Project - Russell Corporation

Introduction
This evaluation reports statistics on all participants who have completed the safety section in the Skills Training at Russell (STAR) program.

Sample Selection
Data were collected from 53 participants at Russell Corporation, Alexander City, Alabama.

Data Collection
Data were collected from August 1993 through March 1995.

Descriptive Statistics
Data in Table 1 (section evaluation - posttest) indicates that 83.01% of the participants achieved at least an 80% mastery of the safety section materials. Mastery was determined by the number of questions answered correctly. There were a total of 12 questions, therefore mastery was achieved by answering 10 or more questions correctly.

<table>
<thead>
<tr>
<th>Number Correct</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible Points = 12</td>
<td>Participants = 53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>1.89</td>
<td>1.89</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>1.89</td>
<td>3.78</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>3.78</td>
<td>7.56</td>
</tr>
<tr>
<td>9</td>
<td>5</td>
<td>9.43</td>
<td>16.99</td>
</tr>
<tr>
<td>10</td>
<td>16</td>
<td>30.19</td>
<td>47.18</td>
</tr>
<tr>
<td>11</td>
<td>10</td>
<td>18.86</td>
<td>66.04</td>
</tr>
<tr>
<td>12</td>
<td>18</td>
<td>33.96</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Descriptive Statistics

Data in Table 2 (participant job specific curriculum surveys) indicated that 69.81 percent of the participants experienced a change in their attitude toward workplace safety. Additionally, 84.91 percent of the participants felt an increased awareness of safety signs, rules, and procedures.

<table>
<thead>
<tr>
<th>Survey Questions</th>
<th>Yes (percentage)</th>
<th>No (percentage)</th>
<th>No Opinion (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has your attitude toward safety changed since being in the program?</td>
<td>69.81</td>
<td>15.095</td>
<td>15.095</td>
</tr>
<tr>
<td>2. Are you more aware of safety signs, rules, and procedures since being in this program?</td>
<td>84.91</td>
<td>5.66</td>
<td>9.43</td>
</tr>
</tbody>
</table>
Summative Evaluation  
Special 353 Demonstration Project in Adult Education  
Work Specific Curriculum Project - Russell Corporation

**Descriptive Statistics**

Data in Table 3 (question 11) indicated that 88.68 percent of the participants agreed the safety information was useful to them on their jobs. Other findings are summarized below.

**Table 3**  
A Summary of Participant Responses  
Participant Job Specific Curriculum Surveys (Safety Section)

<table>
<thead>
<tr>
<th>Survey Questions</th>
<th>Disagree (percentage)</th>
<th>No Opinion (percentage)</th>
<th>Agree (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants = 53*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The safety section materials were interesting.</td>
<td>1.89</td>
<td>20.75</td>
<td>77.36</td>
</tr>
<tr>
<td>2. The safety materials were too easy.</td>
<td>41.51</td>
<td>41.51</td>
<td>16.98</td>
</tr>
<tr>
<td>3. The safety materials were too difficult.</td>
<td>58.49</td>
<td>33.96</td>
<td>7.55</td>
</tr>
<tr>
<td>4. The safety materials were easy to understand.</td>
<td>11.32</td>
<td>13.21</td>
<td>75.47</td>
</tr>
<tr>
<td>5. The safety materials gave me new safety information.</td>
<td>15.09</td>
<td>11.32</td>
<td>73.59</td>
</tr>
<tr>
<td>6. The materials served as a good review of safety information at Russell Corporation.</td>
<td>3.77</td>
<td>11.32</td>
<td>84.91</td>
</tr>
<tr>
<td>7. The safety section will be a good program for new employees.</td>
<td>1.89</td>
<td>5.66</td>
<td>92.45</td>
</tr>
<tr>
<td>*8. My teacher was interested in helping me learn more.</td>
<td>0</td>
<td>4.76</td>
<td>95.24</td>
</tr>
<tr>
<td>*9. My teacher encouraged me to participate in class.</td>
<td>0</td>
<td>9.52</td>
<td>90.48</td>
</tr>
<tr>
<td>*10. Planned class instruction prevented time from being wasted.</td>
<td>0</td>
<td>14.29</td>
<td>85.71</td>
</tr>
<tr>
<td>11. The safety information was useful to me on my job.</td>
<td>0</td>
<td>11.32</td>
<td>88.68</td>
</tr>
<tr>
<td>12. I feel I have improved my reading skills since starting this section.</td>
<td>11.32</td>
<td>41.51</td>
<td>47.17</td>
</tr>
<tr>
<td>13. I feel I have improved my writing skills since starting this section.</td>
<td>16.98</td>
<td>43.40</td>
<td>39.62</td>
</tr>
</tbody>
</table>

* Questions 8, 9, and 10 were not asked of the first 32 participants. For these questions N=21.
Summative Evaluation
Special 353 Demonstration Project in Adult Education
Work Specific Curriculum Project - Russell Corporation

Summative Evaluation -- Comments on Safety Section

Comment #1
The statistical results of the section evaluation (posttest) were encouraging. The majority (83.01 percent) of participants achieved an 80 percent mastery of the safety section materials.

Comment #2
The statistical results of the participant job specific curriculum survey indicate the safety curriculum made a difference in the knowledge base and awareness of Russell Corporation employees. (See Tables 3 and 4)

Comment #3
Participants not accomplishing 80% mastery may need to review the safety section.

Summative Evaluation -- Recommendations on Safety Section

Recommendation #1
New employees should participate in the safety section -- 92.45 percent of the participants agreed with this recommendation.

Recommendation #2
The safety section should be used periodically as a review of safety information at Russell Corporation -- 84.91 percent of the participants agreed with this recommendation.

Recommendation #3
The safety section should be updated regularly. An employee at Russell Corporation should be trained and held responsible for this task.
Technical Assistance and Staff Development
<table>
<thead>
<tr>
<th>Entity Name</th>
<th>Location</th>
<th>Contact Person</th>
<th>Date</th>
<th>Method of Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrysler Corporation</td>
<td>Huntsville, Alabama</td>
<td>Carolyn Peckham</td>
<td>12/1993</td>
<td>Fax, Mail, Telephone</td>
</tr>
<tr>
<td>Dothan Vocational Center</td>
<td>Dothan, Alabama</td>
<td>Susan Thompson Adult Education</td>
<td>8/2/93</td>
<td>Mail, Telephone</td>
</tr>
<tr>
<td>O'Neel Steel, Inc.</td>
<td>Birmingham, Alabama</td>
<td>Leenie Hicks</td>
<td>1993</td>
<td>On Site Visits, Fax, Mail, Telephone</td>
</tr>
<tr>
<td>Southern Ductile Cast Corporation</td>
<td>Bessemer, Alabama</td>
<td>Dave Ford Human Resource Manager</td>
<td>11/1993</td>
<td>On Site Visit, Fax, Mail, Telephone</td>
</tr>
<tr>
<td>Virginia Tech (Division of Vocational and Tech. Center)</td>
<td>Blacksburg, Virginia</td>
<td>Nevin Frantz, Jr., Professor</td>
<td>1993</td>
<td>Mail</td>
</tr>
<tr>
<td>Workplace Resource Center</td>
<td>South Carolina</td>
<td>Ann Nickles</td>
<td>1,993</td>
<td>Mail, Telephone</td>
</tr>
</tbody>
</table>
Staff Development

**Year 2**

★ The Adult Education Supervisor’s Handbook was designed. This handbook was developed as a training package for adult educators. *(See Section E of this report)*

★ A workplace education practicum was offered at Auburn University during Winter Quarter 1994. *(See Section I of this report)*

★ Presentation at Workforce Education Conference (April 1994).

**Year 3**

★ Visited Russell Corporation’s Habbersham Plant (Habbersham, Georgia) to assist the teacher in implementing the STAR program.

★ Presentation at the Regional Adult Education/Literacy Conference, Birmingham, Alabama (June 1995)

★ A workplace education practicum was offered at Auburn University during Summer Quarter 1994. *(See Section J of this report)*
Adult Education
Supervisor’s Handbook
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.

Written by:
Sallie Dowling Averitt, Ed.D.
Workplace Curriculum Specialist
Auburn University

Edited by:
Jo Smith, Ed.D.
Workplace Curriculum Advisor
Auburn University

Betty Graham, Adult Education Supervisor
Mobile, AL

Herbert D. Sims, Adult Education Supervisor
Central Alabama Community College
Childersburg, AL

Randall White, Adult Education Supervisor
Dekalb County Board of Education
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
800-392-8086

Auburn University
Department of Vocational and Adult Education
209A George Wallace Building
Auburn University, Alabama 36849-5529
WORKPLACE EDUCATION TAX CREDIT

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
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
SECTION I
BACKGROUND INFORMATION

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
LITERACY -- THE COMPANY AND THE EMPLOYEE

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.
WORKPLACE EDUCATION PROGRAMS
BACKGROUND INFORMATION

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.
WORKPLACE EDUCATION PROGRAMS
BACKGROUND INFORMATION

DEVELOPMENT OF WORK SPECIFIC WORKPLACE EDUCATION PROGRAMS

7. **Conduct a job task analysis**
   Job tasks 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
WORKPLACE EDUCATION PROGRAMS
BACKGROUND INFORMATION

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!
SECTION II
WORKPLACE EDUCATION WORKSHEETS

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

- 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.

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

<table>
<thead>
<tr>
<th>STEP III</th>
<th>CONTRIBUTORS TO RETENTION IN PROGRAM</th>
</tr>
</thead>
</table>

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 ________________________________
WORKPLACE EDUCATION PROGRAMS

STEP V  EVALUATIONS

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
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*
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
**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 Cl.
# JOB TASKS ANALYSIS

## SAMPLE

**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>

<table>
<thead>
<tr>
<th>B. Sequence of basic job steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
</tr>
</tbody>
</table>
**GENERAL DESCRIPTION:** Oversee and adjust machinery to run within acceptable limits

**DATE:** 00/00/00  
**JOB TITLE:** Machine Operator  
**DEPARTMENT:** XYZ  
**JOB NUMBER:** 000

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

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

M.1.0 Compute using whole numbers
M.1.1 Add whole numbers
M.1.2 Subtract whole numbers
M.1.3 Multiply whole numbers
M.1.4 Divide whole numbers
M.1.5 Perform multiple operations using whole numbers
   (number sentences)
M.1.6 Estimate and round whole numbers
M.1.7 Solve whole number word problems

M.2.0 Compute using decimal fractions
M.2.1 Add decimal fractions
M.2.2 Subtract decimal fractions
M.2.3 Multiply decimal fractions
M.2.4 Divide decimal fractions
M.2.5 Perform multiple operations using decimal
   fractions
M.2.6 Convert decimal fractions to common fractions
   or percents
M.2.7 Estimate and round decimal fractions
M.2.8 Solve decimal fraction word problems

M.3.0 Compute using fractions
M.3.1 Recognize fractional amounts
M.3.2 Understand fraction vocabulary
M.3.3 Add common or mixed fractions
M.3.4 Subtract common or mixed fractions
M.3.5 Multiply common or mixed fractions
M.3.6 Divide common or mixed fractions
M.3.7 Perform multiple operations using fractions
M.3.8 Convert common or mixed fractions to decimal
   fractions or percents
M.3.9 Solve fractions word problems
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
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
*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.
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 ____________________________________________
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  2  3  4
interesting

1  2  3  4
useful on my job

1  2  3  4
content too difficult

1  2  3  4
useful outside work

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

1  2  3  4
hard to learn

1  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? ____________________________________________

_____________________________________________
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?
Attachments I through L have been deleted from the final report. Examples of all items deleted can be found in the sample curriculum sections (F, G, and H).

The sample items deleted include:

- workplace education content
- individual education plan
- lesson
- instruction plan


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 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 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.

Approved Curriculum Sample
(Safety Section)
COMPANY NAME
SAFETY SECTION FOR LEVEL I (BASIC)
INSTRUCTOR MANUAL
1. Readability Tests
2. Safety Section Introduction
3. Lessons Matched With Basic Skills Competency
4. Actual Copies of Work Specific Literature
5. Individualized Education Plan (IEP)
6. Additional Teaching Methodology
7. Section Evaluation & Answers

Distribute a copy of the evaluation to each student after they have completed the 8 safety 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:

Auburn University
Sallie D. Averitt, Ed.D.
Department of Vocational and Adult Education
Donahue and Thach
Auburn University, Alabama 36849-5529

8. A Listing of Supplementary Materials for Remedial Work
COMPANY NAME
READABILITY TESTS FOR SAFETY SECTION

METHOD
GUNNING'S FOG INDEX, FLESCH-KINCAID SCORE, FLESCH READING EASE SCORE, AND FLESCH READING EASE GRADE LEVEL

1. **Gunning's Fog Index** indicates how difficult the document is to read, based on the averages for sentence lengths and the number of multi-syllable words in sentences. The higher the index, the more difficult the document is to read.

2. **Flesch-Kincaid Score** indicates the Fog Index as a grade level. The higher the score, the more difficult the document is to read.

3. **Flesch Reading Ease Score** indicates how easy it is to read and understand the document, based on the average number of words per sentence and the average number of syllables per 100 words. The higher the score, the easier the document is to read and understand.

   The highest score is 100, which indicates the document is very easy to read and understand. An average score is between 60 and 70. A low score is between 0 and 30, which indicates the document is very difficult to read and understand.

4. **Flesch Reading Ease Grade Level** indicates the Flesch Reading Ease Score as a grade level. A fourth grade level corresponds to a score between 90 and 100. An eighth grade level corresponds to a score between 60 and 70. A college education corresponds to a score between 0 and 30.
Lesson 1

Document Statistics:
Words 184 (Frames and graphics were omitted)
Syllables 113
3-Syllable words 6

Readability Statistics:
Gunning's Fog Index 5.7
Flesch-Kincaid Score 3.5
Flesch Reading Ease Score 82.0
Flesch Reading Ease Grade Level 6.8
Lesson 7

Document Statistics:

Words 176 (Frames and graphics were omitted)

Syllables 135

3-Syllable words 8

Readability Statistics:

Gunning's Fog Index 6.3

Flesch-Kincaid Score 4.2

Flesch Reading Ease Score 78.0

Flesch Reading Ease Grade Level 7.2
The Safety Section contains adult-oriented instruction materials for Russell Corporation employees. It was designed to teach accident prevention and work safety.

The academic skill content of this book was determined by topics provided by Russell Corporation. These topics were thought to be essential teaching materials. Topics included (a) application of safety measures, (b) recognition of safety symbols, (c) identification of safety symbols with meanings, (d) safety and proper clothing, (e) safe machine operation, and (f) machine transportation and installation safety.

Samples of workplace materials used in the development of the curriculum were included in this manual. These samples were referenced to the applicable lesson.
Lesson 3
The following competencies were included:

R1.1 Recognizing common words and meanings.

R2.1 Identifying factual details and specifications within text.

R5.1 Using common knowledge for safety.

R5.2 Applying preventative measures prior to task to minimize problems.

R7.2 Making inferences from text.

RS.3 Applies commonsense understanding to carry out instructions furnished in written, oral, or diagrammatic form; deals with problems involving several concrete variables in or from standard situations.

W4.1 Writing brief, descriptive accounts of activities or transactions performed.
Lesson 5
The following competencies were included:

R1.1 Recognizing common words and meanings.

R3.2 Locating pages, titles, paragraphs, figures, or charts needed to answer questions or solve problems.

R4.3 Identifying similarities and differences in objects.

R5.1 Using common knowledge for safety.

R5.2 Applying preventative measures prior to task to minimize problems.

R7.2 Interpreting codes and symbols.

RS.3 Applies commonsense understanding to carry out instructions furnished in written, oral, or diagrammatic form; deals with problems involving several concrete variables in or from standard situations.
Copies of work related materials used to develop the content for lesson 5:

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BEST COPY AVAILABLE
1. The employee level is identified as either I or II. This section is classified as Level I.

2. Each time an employee completes a lesson, the instructor should make certain the Individualized Education Plan (IEP) is properly filled in. This form is located at the beginning of each student book.

3. After the completion of Lesson 8, the employee is to be given a Section Evaluation. If the employee does not achieve an 80% mastery level remedial education is recommended. Sources, although not all inclusive, are listed at the end of the instructor manual.
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SECTION EVALUATION
Lesson 3

1. Words to know

Example: Instruct the students on how to work with a dictionary. Then, allow time for them to practice looking up the lesson words.

Example: Ask the students to observe how the words are syllabified. Explain to them that careful observation of the syllables will help them spell and pronounce the words correctly.

Example: Introduce the topic of "understanding root words." Illustrate this concept by using the words from lessons 1 and 2 -- protection, infection, clothing.

Example: Discuss prefixes. The word prefix means "put before." It is a syllable placed in front of a word to change its meaning. For example, common prefixes and meanings include de-, dis-: from, down, away, or opposite. Instruct the students to underline the prefixes of lesson words.

Example: Introduce suffixes. Illustrate this concept by using one of the lesson words, e.g., infection. This is a common suffix that means: tion = act of or state of (noun). Instruct the students to circle the suffixes of lesson words.

Example: Try to bring together the discussions on prefixes, roots, and suffixes. Explain to the students that words are made up of these parts, and that different combinations of these parts make different words. The root is the main part that gives the word its basic meaning, but this meaning is changed by adding another part to the beginning or to the end of the root -- prefix or suffix.

Example: Students might write sentences using all the words. After writing the sentences, ask them to underline the subjects and predicates.
Lesson 3 (continued)

Resource - *Gateways to Correct Spelling*. Steck-Vaughn.

Example: Instruct the students to alphabetize the "Words to know" in Lessons 1, 2, and 3.

Example: Introduce the topic of compound words. Use words from the lessons, for example, housekeeping, workplace, ashtrays, bathrooms, etc.

2. Safety and Housekeeping


Example: This would be a good time to talk about sentence structure (e.g., parts of speech, compound sentences, sentence fragment, etc.), grammar usage (e.g., subject and verb agreement, use of pronouns, etc.), punctuation (e.g., commas, semicolons, apostrophes, etc.), and capitalization. Resource: *Developing Writing Skills*. Steck-Vaughn.

Example: Copy the Housekeeping Inspection Form at the end of this section and distribute a copy to each student. Instruct the students to fill out the form and mark the items while walking through the plant. Discuss the areas on the form that were marked not ok.

Example: Assist each student in figuring the percentage of items he marked not ok on the Housekeeping Inspection Form. Compare percentages.
Lesson 5

1. Words to know

Example: Refer to Lesson 3

Example: See how many words the students can derive from the two words, adjustment and secure.

2. Machine adjustment and the main switch

Example: Tour the plant and give a demonstration of proper machine adjustment as it relates to the main switch function.

3. A √ or an X

Example: Discuss the significance of the markings √ versus X. List things students might see with an X, such as a marking on poison, a wrong answer, a railway crossing, etc. Next, list things students might see with a √, such as a check mark on an attendance book for being present, a to-do-list checked off as the chores are completed, a correct answer, etc.
Directions: Circle the letter of the best answer.

1. Your body's defense against loud noise is:
   A. a limited hearing loss.
   B. deafness.
   C. a decreased attention span.
   D. a headache.

2. Safety rules at work include all the following except:
   A. Do not wear loose clothing.
   B. Long hair must be protected.
   C. Tools must be carried in shirt pockets.
   D. Ties should not be worn.

3. To practice good housekeeping at work you need to:
   A. stack cartons, furniture, or equipment in aisles away from the machine.
   B. report electrical equipment that has damaged wiring.
   C. leave file drawers open where others might use the contents.
   D. tell someone to wipe up spills or pick up trash.
1. B
2. C
3. B
4. C
5. A
6. B
7. D
8. D
9. C
10. D

Please return this evaluation to:

Auburn University
Sallie D. Averitt, Ed.D.
Department of Vocational & Adult Education
Donahue & Thach
Auburn University, AL 36849-5529
Lesson 3

Work specific curriculum correlated to Russell Corporation software:

(a) **Reading for Meaning**
   Content: Reading More than the Words
   Core I (Russell Corporation)
   Level II (IBM Reference Guide)

(b) **Make a Word**
   Content: Roots, Prefixes, and Suffixes
   Core I (Russell Corporation)
   Level II (IBM Reference Guide)

(c) **Punctuation**
   Content: First Words, End Marks
   Core I (Russell Corporation)
   Level II (IBM Reference Guide)
Lesson 3 (continued)

Work specific curriculum correlated to CASAS (Comprehensive Adult Student Assessment System) curriculum materials - 1992 Edition:

(a) *Ready to Work: Winning at the Job Game*  

Competency number 4.1.6 - Interpret general work-related vocabulary (e.g., experience, swing shift)

Level I (AU Work Specific Curriculum / Basic Level)

Level A & B (CASAS - Basic)

Contemporary Books Inc.  
180 North Michigan Avenue  
Chicago, IL 60601  
(800) 621-1918

(b) *Practical English*  
Owen. 1990.  
Chapter 12

Competency number 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

Level I (AU Work Specific Curriculum / Basic Level)

Level A & B (CASAS - Basic)

Fearon/Janus/Quercus  
500 Harbor Boulevard  
Belmont, CA 94002  
(800) 877-4283
Lesson 3 (continued)

Work specific curriculum correlated to CASAS (Comprehensive Adult Student Assessment System) curriculum materials - 1992 Edition:

(c) Workwise: Tactics for Success
Section 9,11

Competency number 4.4.4 - Interpret job responsibilities and performance reviews

Level I (AU Work Specific Curriculum / Basic Level)

Level A & B (CASAS - Basic)

Contemporary Books Inc.
180 North Michigan Avenue
Chicago, IL 60601
(800) 621-1918
Lesson 5

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COMPANY NAME
INDIVIDUALIZED EDUCATION PLAN

NAME ________________________________

SOCIAL SECURITY NUMBER __ __ - __ __ - __ __

SECTION SAFETY __________________ LEVEL ____________________

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DATE OF EVALUATION

Mastery Level:
10% Standard: $correct/total
Instructor Recommendation:

SECTION EVALUATION

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113
Lesson 3
Recognizing cause and effect

- Using common knowledge for safety
- Applying preventative measures prior to task to minimize problems

Safety and Housekeeping

In a safe workplace, housekeeping is everyone's job. Every employee looks out for unsafe conditions that could cause injury.

Words to know:

- aisle a passage for inside traffic
- dispose to get rid of
- report statement of conditions, occurrences, events
- close to shut
- sanitary free from filth or infective matter (clean)
YOUR SAFETY NEWS - COMPANY NAME

HOUSEKEEPING ... IT'S EVERYONE'S JOB!

Good housekeeping at work includes the following items:

1. Pick up any trash you see and clean up spills.
2. Do not stack cartons, furniture, or equipment in aisles.
3. Close file drawers when you are finished with them.
4. Report electrical equipment that has bad wiring.
5. Report torn or ripped floor coverings.
6. Use ashtrays to dispose of smoking materials.
7. Keep kitchens and bathrooms neat and sanitary.
Lesson 3

List ways you can help in keeping your work area safe. Try to write these without looking at the preceding pages.

1.

2.

3.

4.

5.

6.

7.
Lesson 3

**HOUSEKEEPING IS EVERYONE'S JOB!**

Directions: Circle the letter(s) of the correct answer.

Hint: There may be more than one answer.

1. The machine surfaces, floor, creel, drafting area, and can doffing areas should be kept clean or free of:
   - A. cotto. dust
   - B. lint
   - C. tags
   - D. noise
Lesson 5
Recognizing cause and effect

- Using common knowledge for safety
- Applying preventative measures prior to task to minimize problems
- Selecting appropriate course of action in emergency

Machine Adjustments

The main switch on the machine must be turned off and secured before any adjustments are made.

Words to know:

- adjustment  to fix, adapt, or set right (to alter so as to make efficient or more effective)
- secure free from danger or loss
Review the following pictures & steps.

- Set main switch to "0" (off position)
- Press slide switch (1)
- Secure with padlock (2)

- Set main switch to "off" position
- Push slide switch (1) in the direction of arrow
- Secure with padlock (2)
Lesson 5

Circle the picture that shows the correct machine setting when machine adjustments are being made.
Lesson 5

1. When machine adjustments are being made the main switch should be: (Circle the correct letter)
   a. turned to the on position.
   b. set in between the on and off position.
   c. turned to the off position.
   d. ignored (passed over without giving due attention).

2. Circle the symbol used in making machine adjustments when the main switch is turned to the off position.

   ![Symbol choices]

3. Circle the symbol used when making machine adjustments. The main switch is turned to the on position.

   ![Symbol choices]
ANSWER KEY
SAFETY SECTION

Lesson 1:
1. Deafness
2. I can protect my hearing by wearing ear plugs.
3. I should make certain my hands are clean.

Lesson 2:
1. X
2. T
3. T
4. X

Lesson 3 p. 9:
Answers will vary

Lesson 3 p. 10:
1. A, B, & C

Lesson 4 p. 15:
1. D
2. B
3. A
1. Readability Tests
2. Safety Section Introduction
3. Lessons Matched With Basic Skills Competency
4. Actual Copies of Work Specific Literature
5. Individualized Education Plan (IEP)
6. Additional Teaching Methodology
7. Section Evaluation & Answers
   Distribute a copy of the evaluation to each student after they have completed the 8 safety 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:

Auburn University
Sallie Averitt, Ed.D.
Department of Vocational and Adult Education
Donahue and Thach
Auburn University, Alabama 36849-5529

8. A Listing of Supplementary Materials for Remedial Work
METHOD
GUNNING'S FOG INDEX, FLESCH-KINCAID SCORE, FLESCH READING EASE SCORE, AND FLESCH READING EASE GRADE LEVEL

1. Gunning's Fog Index indicates how difficult the document is to read, based on the averages for sentence lengths and the number of multi-syllable words in sentences. The higher the index, the more difficult the document is to read.

2. Flesch-Kincaid Score indicates the Fog Index as a grade level. The higher the score, the more difficult the document is to read.

3. Flesch Reading Ease Score indicates how easy it is to read and understand the document, based on the average number of words per sentence and the average number of syllables per 100 words. The higher the score, the easier the document is to read and understand.

   The highest score is 100, which indicates the document is very easy to read and understand. An average score is between 60 and 70. A low score is between 0 and 30, which indicates the document is very difficult to read and understand.

4. Flesch Reading Ease Grade Level indicates the Flesch Reading Ease Score as a grade level. A fourth grade level corresponds to a score between 90 and 100. An eighth grade level corresponds to a score between 60 and 70. A college education corresponds to a score between 0 and 30.
Lesson 1

Document Statistics:
Words 144 (Frames and graphics were omitted)
Syllables 136
3-Syllable words 13

Readability Statistics:
Gunning's Fog Index 10.3
Flesch-Kincaid Score 6.6
Flesch Reading Ease Score 67.6
Flesch Reading Ease Grade Level 8.2
Lesson 8

Document Statistics:

Words 1041 (Frames and graphics were omitted)

Syllables 886

3-Syllable words 81

Readability Statistics:

Gunning's Fog Index 10.2

Flesch-Kincaid Score 7.3

Flesch Reading Ease Score 62.5

Flesch Reading Ease Grade Level 8.8
The Safety Section contains adult-oriented instruction materials for Russell Corporation employees. It was designed to teach accident prevention and work safety.

The academic skill content of this book was determined by topics provided by Russell Corporation. These topics were thought to be essential teaching materials. Topics included (a) application of safety measures, (b) recognition of safety symbols, (c) identification of safety symbols with meanings, (d) safety and proper clothing, (e) safe machine operation, and (f) machine transportation and installation safety.

Samples of workplace materials used in the development of the curriculum were included in this manual. These samples were referenced to the applicable lesson.
Lesson 3
The following competencies were included:

R1.1 Recognizing common words and meanings.

R4.2 Selecting parts of text or visual materials to complete a task.

R5.1 Using common knowledge for safety.

R5.2 Applying preventative measures prior to task to minimize problems.

R7.2 Making inferences from text.

R8.3 Applies commonsense understanding to carry out instructions furnished in written, oral, or diagrammatic form; deals with problems involving several concrete variables in or from standard situations.
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The following competencies were included:

R1.1 Recognizing common words and meanings.

R4.3 Identifying similarities and differences in objects.

R5.1 Using common knowledge for safety.

R5.2 Applying preventative measures prior to task to minimize problems.

R5.3 Selecting appropriate course of action in emergency.

R6.8 Identifying details, labels, numbers, parts of an illustration, parts from a key or legend.

R7.2 Making inferences from text; interpreting codes and symbols.

RS.3 Applies commonsense understanding to carry out instructions furnished in written, oral, or diagrammatic form; deals with problems involving several concrete variables in or from standard situations.
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SECTION EVALUATION
Lesson 3

1. Housekeeping and safety

Example: Copy the Housekeeping Inspection Form at the end of this section and distribute a copy to each student. Instruct the students to fill out the form and mark the items while walking through the plant. Discuss the areas on the form that were marked not ok.

Example: Ask each student to figure the percentage of items he marked not ok on the Housekeeping Inspection Form. Compare percentages.

2. Writing exercise

Example: Write an essay on housekeeping and whose responsibility it is at work, as well as at home. Evaluate the students' writing skills and, if necessary, discuss various facets of language, e.g., sentence construction, punctuation, parts of speech - nouns, verbs, adjectives, adverbs, pronouns, conjunctions etc. Resource: Teaching Adults to Write. Author: Foresman Scott. 1986. Glenview, IL: Scott, Foresman & Company, Lifelong learning Division. (800-323-5482)
Lesson 5

1. Machine adjustment and the main switch

Example: Tour the plant and give a demonstration of proper machine adjustment as it relates to the main switch function.

2. A √ or x

Example: Discuss the significance of the markings √ versus x. List things students might see with an x, such as a marking on poison, a wrong answer, etc. Next, list things students might see with a √, such as a check mark on an attendance book for being present, a to-do-list checked off as the chores are completed, a correct answer, etc.
1. The body's natural defense against loud noise is:
   A. indifference.
   B. a decreased attention span.
   C. deafness.
   D. a limited hearing loss.

2. To practice good housekeeping at work you need to:
   A. stack cartons, furniture, or equipment in aisles away from the machine.
   B. report electrical equipment that has damaged wiring.
   C. leave file drawers open where others might use the contents.
   D. tell someone else to wipe up spills or pick up trash.

3. Which safety symbol means there is a possibility of machine damage or technical fault if rules are broken?
   A. B. C. D.
ANSWER KEY

1. C
2. B
3. A
4. D
5. D
6. A
7. D
8. D
9. A
10. C

Please return this evaluation to:

Auburn University
Sallie Averitt, Ed.D.
Department of Vocational & Adult Education
Donahue & Thach
Auburn University, AL 36849-5529
Lesson 3

Work specific curriculum correlated to Russell Corporation software:

(a) **Punctuation**
   Content: First words, end marks, and commas
   Core II & III (Russell Corporation)
   Levels III & IV (IBM Reference Guide)

(b) **Reading for Meaning**
   Content: Reading More than the Words
   Core II & III (Russell Corporation)
   Levels III & IV (IBM Reference Guide)

(c) **Reading for Information**
   Content: Reading Arguments
   Core II & III (Russell Corporation)
   Levels III & IV (IBM Reference Guide)
Lesson 3 (continued)

Work specific curriculum correlated to CASAS (Comprehensive Adult Student Assessment System) curriculum materials - 1992 Edition:

(a) *Survival Sourcebook - A Living Skills Guide*  
Hunzeke & others. 1982. pp. 103-105

Competency number 3.4.2 - Identify safety measures that can prevent accidents or injuries

Level II (AU Work Specific Curriculum / Advanced Level)

Level C & D (CASAS - Advanced)

Contact, Inc.  
P.O. Box 81826  
Lincoln, NE 68501-1826  
(402) 464-0602

(b) *Workforce Literacy for JOBs 2000*  

Competency number 4.1.6 - Interpret general work-related vocabulary, e.g., experience, swing shift, etc.

Level II (AU Work Specific Curriculum / Advanced Level)

Level C & D (CASAS - Advanced)

Education Design Inc.  
1937 Grand Avenue  
Baldwin, NY 11510  
(800) 645-3739
Lesson 3 (continued)

Work specific curriculum correlated to CASAS (Comprehensive Adult Student Assessment System) curriculum materials - 1992 Edition:

(c) *Workforce Literacy for JOBS 2000*
   Competency number 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions
   Level II (Au Work Specific Curriculum / Advanced Level)
   Level C & D (CASAS - Advanced)
   Education Design Inc.
   1937 Grand Avenue
   Baldwin, NY  11510
   (800) 645-3739

(d) *Reading for Workplace Success*
   Park, Olson, Oldham. 1991.
   Competency number 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions
   Level II (Au Work Specific Curriculum / Advanced Level)
   Level C & D (CASAS - Advanced)
   Paradigm Publishing International
   7500 Flying Cloud Drive
   Eden Prairie, MN  55344
Lesson 5

Work specific curriculum correlated to Russell Corporation software:

(a) **Punctuation**
Content: First words, end marks, and commas
Core II & III (Russell Corporation)
Levels III & IV (IBM Reference Guide)

(b) **Nouns, Verbs, Adjectives, etc.**
Content: Parts of Speech
Core III (Russell Corporation)
Levels III & IV (IBM Reference Guide)

(c) **Combining Sentences**
Core II
Levels III & IV (IBM Reference Guide)
Lesson 5 (continued)

Work specific curriculum correlated to CASAS (Comprehensive Adult Student Assessment System) curriculum materials - 1992 Edition:

(a) On-The-Job

Competency number 4.3.1 - Interpret safety signs found in places of training, in employment, and in public buildings

Level II (AU Work Specific Curriculum / Advanced Level)
Level C & D (CASAS - Advanced)

Media Materials, Inc.
1821 Portal Street
Baltimore, MD 21224
(800) 638-1010

(b) Workforce Literacy for JOBS 2000

Competency number 4.1.6 - Interpret general work-related vocabulary, e.g., experience, swing shift, etc.

Level II (AU Work Specific Curriculum / Advanced Level)
Level C & D (CASAS - Advanced)

Education Design Inc.
1937 Grand Avenue
Baldwin, NY 11510
(800) 645-3739
Lesson 5 (continued)

Work specific curriculum correlated to CASAS (Comprehensive Adult Student Assessment System) curriculum materials - 1992 Edition:

(c) Workforce Literacy for JOBs 2000

Competency number 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

Level II (Au Work Specific Curriculum / Advanced Level)

Level C & D (CASAS - Advanced)

Education Design Inc.
1937 Grand Avenue
Baldwin, NY 11510
(800) 645-3739

(d) Reading for Workplace Success
Park, Olson, Oldham. 1991.

Competency number 4.4.3 - Recognize and use occupational signs, charts, forms, and written directions

Level II (Au Work Specific Curriculum / Advanced Level)

Level C & D (CASAS - Advanced)

Paradigm Publishing International
7500 Flying Cloud Drive
Eden Prairie, MN 55344
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COMPANY NAME
INDIVIDUALIZED EDUCATION PLAN

NAME ________________________________

SOCIAL SECURITY NUMBER ____________

SECTION SAFETY _______________ LEVEL _______________

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SECTION EVALUATION

146 BEST COPY AVAILABLE
Lesson 3
Recognizing cause and effect
  • Using common knowledge for safety
  • Applying preventative measures prior to task to minimize problems

Housekeeping ... It's Everyone's Job!

How many times have you walked down an aisle at work, noticed a piece of garbage or a spill on the floor, and walked right by it without doing anything? You could have picked up that piece of trash or wiped up that spill, but you thought it "wasn't your job."

Now, how many times have you tripped on a piece of trash or slipped on a puddle? At least once, right?

There's a connection here: that puddle you slipped on is the same one someone (maybe even you, yourself) failed to wipe up because it "wasn't his or her (or your) job."

In a safe workplace, housekeeping is everyone's job. In a safe workplace, every employee looks out for unsafe conditions that could cause injury; and every employee takes those few extra minutes to correct the problem.

To practice good housekeeping at work, you need to do the following:
  • PICK UP any trash you see lying around and wipe up spills.
  • DON'T stack cartons, furniture, or equipment in aisles.
  • CLOSE file drawers when you are done with them.
  • REPORT any electrical equipment that has damaged wiring.
  • REPORT any torn or ripped carpeting or floor coverings.
  • USE ashtrays to dispose of smoking materials.
  • KEEP kitchens and bathrooms neat and sanitary.
Lesson 3

Directions:
Read the preceding page and answer the following questions in the space provided. Write your answers in complete sentences.

1. In your own words, what is the connection referred to in the third paragraph?

2. Whose job is it to pick up trash or wipe up a spill?

3. List ways that you can practice good housekeeping at work. Try to write the list without referring to the previous page.
Lesson 5
Recognizing cause and effect

- Using common knowledge for safety
- Applying preventative measures prior to task to minimize problems
- Selecting appropriate course of action in emergency

Machine Adjustments

The main switch must be switched off and secured before any adjustments are carried out. Review the following charts and procedures.

- Set main switch to "0" (off position)
- Press slide switch (1)
- Secure with padlock (2)

- Set main switch to "off" position
- Push slide switch (1) in the direction of arrow
- Secure with padlock (2)
Lesson 5

Assume machine adjustments are being made. Explain in your own words what each of the illustrations below mean. Include in your answer the significance of the symbols displayed on the charts? Write your answer on the following page.
Lesson 1:
1. The body's natural defense against loud noise is deafness.
2. Hearing loss can be avoided by wearing hearing protection, such as ear plugs.
3. I should make certain my hands are clean because dirt in the ear canal can cause infection.
4. Some of the signs of hearing loss include not being able to hear normal conversation, either in person or on the telephone, or having a ringing sound in your ear.

(Use discretion in grading these questions -- answers may vary)

Lesson 2:
1. Answers will vary
2. Items (b) (d) and (e) should be marked with an "X"

Lesson 3:
Answers to 1, 2, and 3 will vary. Use discretion in grading these items.

Lesson 4:
1. F
2. A
3. E
4. G
5. D
6. B
7. C
Approved Curriculum Sample

(Vocabulary and Forms Section - developed during year 2)
LEVEL ________________________________

LESSON TOPIC__ General Vocabulary ________________

LESSON NUMBER__ 1 ________________

DATE RECEIVED FROM AUBURN UNIVERSITY______________________________

1. The lesson is technically correct.          __/YES__/NO

   If no, list corrections that need to be made.

   A. 
   B. 
   C. 

2. The lesson teaches to the topic addressed.  __/YES__/NO

   If no, list corrections that need to be made.

   A. 
   B. 
   C. 

3. The answers to the lesson are correct.      __/YES__/NO

   If no, indicate the corrections.

   A. 
   B. 
   C. 

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4. The supplementary materials are adequate. □ YES □ NO
   If no, indicate areas of deficiency.
   A.  
   B.  
   C.  

5. This lesson is appropriate for public dissemination. □ YES □ NO

6. The lesson may be disseminated with Russell Corporation's name in the heading. □ YES □ NO

7. Other comments:

Reviewed by: Becky Dunn (Russell Corporation)
Date: 12-13-93
(This date should not be more than 30 days after date received.)

Approved: Dick Dickson (Russell Corporation)
Date: 12-13-93
(This date should not be more than 30 days after date received.)
### VOCABULARY FACT SHEET

The most basic reading comprehension skill is abstracting meaning from words.

Words are written symbols that represent concepts.

Words are written symbols that trigger mental associations.

As a person increases his vocabulary, he also increases his ability to learn many new facts and ideas. This is true because he is able to make a greater number of associations.

*Developing Reading Skills, Steck-Vaughn Company, 1990, p. 47.*
1. Vocabulary Section Introduction

2. Primary Vocabulary Objective

3. Author's Note to Instructor

4. Individualized Education Plan (IEP)

5. Lesson I (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 II (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 III (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
8. Lesson IV (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 V (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 VI (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 VII (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 VIII (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 IX (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
The Work Specific Vocabulary Section contains adult-oriented instruction materials for Russell Corporation employees. The teaching methodology, i.e., lessons, worksheets, and suggested instruction guideline, were designed to teach work specific vocabulary.

This phase of the curriculum was based primarily on the Alabama Adult Education Curriculum, Basic Skills - Scope and Sequence. A specific listing of the competencies was included with each lesson.

The academic skills content of this book were determined by Russell Corporation. The vocabulary areas identified were thought to be essential to the employees' ability to communicate and perform job tasks. These areas included (a) general work specific vocabulary, (b) carding general, (c) carding common, (d) carding technical, (e) combing, (f) drawing, (g) roving, (h) spinning, and (i) winding.

Readability tests were performed on each area of the vocabulary. The results of these tests were included in the instructor manual.

The work specific curriculum materials were correlated with the Tests of Adult Basic Education (TABE), Russell Corporation's IBM software, and Comprehensive Adult Student Assessment System (CASAS). These correlations can be found under the section entitled supplementary materials.

Samples of workplace materials used in the development of the curriculum were included in this manual. These samples can be found as a part of each lesson in the instructor manual.

An Individualized Education Plan (IEP) was included in each student book. After the employee has completed the last lesson, he/she will be given a section evaluation (posttest). If the employee does not achieve an 80% mastery level, remedial education is recommended. Sources, although not all inclusive, are listed in the supplementary materials section.

A copy of the section evaluation (posttest) is located in the instructor manual. This evaluation will be administered after the employee has completed all lessons in the vocabulary section.
Primary Vocabulary Objective: Russell employees will demonstrate the ability to recognize common words and meanings. In addition, they will be able to identify task related words with technical meanings, and meanings for common abbreviations and acronyms.
Instructor's Note

Read aloud all lesson instructions. If possible, instruct one of the participants to read -- be careful not to embarrass a poor reader.

Assist participants in understanding the lesson directions.

Always encourage the use of a standard dictionary.

Remind participants of the Work Specific Dictionary located at the end of each lesson.
RUSSELL CORPORATION
INDIVIDUALIZED EDUCATION PLAN
1. Each time an employee completes a lesson, the instructor should make certain the Individualized Education Plan (IEP) is properly filled in. This form is located at the beginning of each student book.

2. A section evaluation (posttest) is administered after the employee completes the last lesson. If the employee does not achieve an 80% mastery level, remedial education is recommended. Sources, although not all inclusive, were listed at the end of the instructor manual.
## RUSSELL CORPORATION
### INDIVIDUALIZED EDUCATION PLAN

**NAME**

**SOCIAL SECURITY NUMBER** __-__-____

**SECTION** Vocabulary _______________ **LEVEL** _______________

**PLANT AND LOCATION** _______________

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RUSSELL CORPORATION
BASIC COMPETENCY SKILLS
Lesson I

The lesson was designed to help Russell Corporation employees acquire the ability to:

1. Recognize common words and meanings.
2. Recognize job related vocabulary words.
3. Define job related vocabulary words as they relate to the employees' job.
4. Use basic capitalization rules -- review (instructor manual exercise #8).
5. Use basic rules for punctuation -- review (instructor manual exercise #8).
6. Identify the four kinds of sentences -- review (instructor manual exercise #8).
7. Recognize verbs -- review (instructor manual exercise #6).
8. Identify similarities and differences in objects -- (instructor manual exercise #7).
9. Demonstrate word alphabetization.
10. Recognize root words.
11. Recognize suffixes.
12. Use synonyms, antonyms, and homonyms.
13. Separate syllables (syllabication).
15. Locate information (dictionary, reference manuals, etc.).
16. Write sentences using vocabulary words.
Lesson I (continued)

The lesson was designed to help Russell Corporation employees acquire the ability to:

17. Apply commonsense understanding to carry out instructions furnished in written, oral, or diagrammatic form; deals with problems involving several concrete variables in or from standard situations.

18. Follow directions.

19. Skim and scan information.

20. Select parts of a visual to complete a task.

21. Read two or more column charts to obtain information.

22. Multiply whole numbers.

23. Divide whole numbers.

24. Multiply decimal fractions.

25. Divide decimal fractions.

26. Perform basic metric conversions involving weight, distance, and volume.

27. Convert U.S. Customary to the International Metric System of measurement.

28. Use a calculator to perform basic arithmetic operations to solve problems (instructor manual exercise #5).

29. Interpret symbols.
RUSSELL CORPORATION
SUGGESTED INSTRUCTION GUIDELINE
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.
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.

\[
\begin{align*}
1 \text{ lb.} & = 453.6 \text{ g} \\
16 \text{ oz.} & = 1 \text{ lb.} \\
16 \text{ oz.} & = (16 \times 28.35) 453.6 \text{ g}
\end{align*}
\]

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 exclamationary 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
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:

\[.34 + .57 = \_\_\_\_\_\_\_\_\]

\[45.3 - .19 = \_\_\_\_\_\_\_\_\]

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

\[.23 \times 1.5 = \_\_\_\_\_\_\_\_\]

\[4.4 \div .2 = \_\_\_\_\_\_\_\_\]

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

Alabama State Department of Education
Auburn University - Department of Vocational & Adult Education
Russell Corporation - Alexander City, Alabama

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)
### Vocabulary Section Contents

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<td>2</td>
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<td>3</td>
<td>Carding Common Vocabulary</td>
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<td>Carding Technical Vocabulary</td>
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<td>5</td>
<td>Combing Vocabulary</td>
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<tr>
<td>6</td>
<td>Drawing Vocabulary</td>
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<td>Roving Vocabulary</td>
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<td>Spinning Common Vocabulary</td>
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<tr>
<td>9</td>
<td>Winding Vocabulary</td>
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</tbody>
</table>

**Diagram:**
- **Words**
- **To**
- **Know!**
RUSSELL CORPORATION
INDIVIDUALIZED EDUCATION PLAN

NAME

SOCIAL SECURITY NUMBER __ __ __ - __ __ __ __ __

SECTION Vocabulary LEVEL

PLANT AND LOCATION

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<th>DATE COMPLETED</th>
<th># CORRECT/TOTAL</th>
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<td>LESSON 3 Carding Common Vocabulary</td>
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<tr>
<td>LESSON 4 Carding Technical Vocabulary</td>
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<td>LESSON 5 Combing Vocabulary</td>
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<td>LESSON 8 Spinning Common Vocabulary</td>
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<tr>
<td>LESSON 9 Winding Vocabulary</td>
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</table>

EVALUATION LESSONS 1-9

<table>
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<th>DATE OF EVALUATION</th>
<th>Mastery Level: 80% Standard #correct/total</th>
<th>Instructor Recommendation:</th>
</tr>
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</table>

SECTION EVALUATION


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

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>8.</td>
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<tr>
<td>2.</td>
<td></td>
<td>9.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>10.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>11.</td>
<td></td>
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<tr>
<td>5.</td>
<td></td>
<td>12.</td>
<td></td>
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<tr>
<td>6.</td>
<td></td>
<td>13.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>14.</td>
<td></td>
</tr>
</tbody>
</table>
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
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.
## Lesson 1 - General Vocabulary

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.

   
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Number 1</th>
<th>Number 2</th>
<th>Number 3</th>
<th>Number 4</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>108</td>
<td>33</td>
<td>432</td>
<td>4</td>
<td>5,329</td>
</tr>
<tr>
<td>+</td>
<td>101</td>
<td>64</td>
<td>345</td>
<td>5</td>
<td>4,999</td>
</tr>
</tbody>
</table>

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

   
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Number 1</th>
<th>Number 2</th>
<th>Number 3</th>
<th>Number 4</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>15</td>
<td>7</td>
<td>59</td>
<td>23</td>
<td>769</td>
</tr>
<tr>
<td>-</td>
<td>9</td>
<td>5</td>
<td>30</td>
<td>9</td>
<td>-685</td>
</tr>
</tbody>
</table>
Review the following symbols and meanings. Solve the problems.

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

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

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

   \[ \begin{array}{ccc}
   20 \div 5 = & 36 \div 6 = & 0 \div 5 = \\
   32 \div 8 = & 210 \div 10 = \\
   \end{array} \]
Review the following symbol and meaning. Solve the word problem below. Remember, you may use a calculator.

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 your 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>MULTIPLE 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. x 12 = 12 in.</td>
</tr>
<tr>
<td>yards (yd.)</td>
<td>3</td>
<td>feet (ft.)</td>
<td>1 yd. x 3 = 3 ft.</td>
</tr>
<tr>
<td>pounds (lb.)</td>
<td>16</td>
<td>ounces (oz.)</td>
<td>1 lb. x 16 = 16 oz.</td>
</tr>
</tbody>
</table>

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

   \[5 \text{(lb.}) \times 16 = \underline{\phantom{0}} \text{ oz.}\]

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,
   \[6 \div 3 \text{ ft.}\])
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>

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.

**WORD SCRAMBLE**

Unscramble the following general vocabulary words. You may look back at the preceding pages.

1. NYALWD
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:

pneu...ility 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
t u m m a 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 b a p a i n t o y
n s g n i t i s i w t r
g a p r k y y p k g

10/03/93
Page 25
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
Page 26
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
1. **Bobbin lay or bobbin build** is the pattern lined on a bobbin or cone (see Figure 1) or tube.

2. A **bobbin stripper** is a machine used to clean waste bobbins. Waste bobbins are bobbins that have been run to their maximum in the spinning process -- empty bobbins.

3. **Break back** is a roving package that consists of defective sliver. The package cannot be processed until the defective sliver is removed.

4. **Count** denotes yarn number systems. The yarn numbering system is based on length and weight. It is based on a unit length of 840 yards (yd.), and the count of the yarn is equal to the number of 840-yard skeins required to equal one pound (lb.) -- under this system, the higher the number, the finer the yarn. See Table 1.

   For example:  
   
   Length = 840 (yd.)
   Weight = 22 (840-yard skeins) = 1 (lb.)

5. In yarn manufacturing, **doubling** is the process of combining two or more strands of sliver, roving, or yarn at once to produce one.

6. Seven thousand (7000) **grains** equal one pound (lb.).

   Example:  
   
   1 (lb.) ≈ 453.6 grams (g)
   grams × 15.43 ≈ grains

   **How many grains are there in one pound (lb.)?**

   **Problem Solution**
   
   453.6 × 15.43 = 6999.048 grains
   1 pound (lb.) ≈ 7000 grains*

   *You will notice that we use the sign (≈) which means "approximately equal to" -- when English units are compared to the metric system the two measures are not equal. The measures are approximately equal. (See Table 2)
7. One **hank** equals 840 yards (yd.) -- a standard length of slubbing, roving, or yarn. A hank is a skein of yarn. The length is specified by the yarn numbering system in use; e.g., cotton hanks have a length of 840 (yd.).

8. **Humidity** is the amount of moisture in the air.

9. **Laydown** is the first process of a yarn plant. This phrase means that an adequate amount of baled cotton has been uniformly aligned.
   (Uniformly: Not changing or showing any variation)
   (Aligned: to bring into line -- to line up)

10. **Micronaire** is a relative measurement of fineness. It is the diameter of cotton fibers.
    (Diameter: straight line through the center of a circle -- thickness)

11. **Pneumafil** is a term used to identify short fibers, trash, and excess fibers.

12. **Skein** is a continuous strand of yarn or cord in the form of a collapsed coil. It may be of any specified length and is usually obtained by winding a definite number of turns on a reel.

13. **Strength** is the breaking tenacity of fiber, yarn, or similar structure.
    (Tenacity: holding fast)

14. **Twisting** takes the double strands of fiber and makes them uniform -- keeps the strands together. Twisting is used to increase strength, smoothness, and uniformity, or to obtain novelty effects in yarn.
    (Novelty: something new or unusual)
Figure 1

Cheese Cone Cone Hosiery Cone Warp-Wind Package Pineapple Package

Taper (½ angle) 0° 3°30' 4°20' 5°15' 3°30' 0°

Six Yarn Packages in Common Use

(Graphics: Dictionary of Fiber & Textile Technology, Hoechst Celanese Corporation, 1990.)
Table 1

Yarn Number Conversion Table

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<tr>
<th>Yards per Pound</th>
<th>Wool Runs (1600 yd per lb)</th>
<th>Cotton Count (840 yd per lb)</th>
<th>Worsted Count (560 yd per lb)</th>
<th>Metric Count (1000 m per kg)</th>
<th>Linen Count (300 yd per lb)</th>
<th>Grains per 100 Yards</th>
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### Table 2

**Measures, Weights, Equivalents**

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<td>x 453.6</td>
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1 pound (lb.) ≈ 453.6 grams x 15.43 ≈ 7,000 grains
RUSSELL CORPORATION - LESSON 1
READABILITY TEST FOR VOCABULARY WORDS AND DEFINITIONS
RUSSELL CORPORATION
READABILITY TEST FOR VOCABULARY SECTION
LESSON 1 - GENERAL VOCABULARY

METHOD
GUNNING'S FOG INDEX, FLESCH-KINCAID SCORE, FLESCH READING EASE SCORE, AND FLESCH READING EASE GRADE LEVEL

1. Gunning's Fog Index indicates how difficult the document is to read, based on the averages for sentence lengths and the number of multi-syllable words in sentences. The higher the index, the more difficult the document is to read.

2. Flesch-Kincaid Score indicates the Fog Index as a grade level. The higher the score, the more difficult the document is to read.

3. Flesch Reading Ease Score indicates how easy it is to read and understand the document, based on the average number of words per sentence and the average number of syllables per 100 words. The higher the score, the easier the document is to read and understand.

   The highest score is 100, which indicates the document is very easy to read and understand. An average score is between 60 and 70. A low score is between 0 and 30, which indicates the document is very difficult to read and understand.

4. Flesch Reading Ease Grade Level indicates the Flesch Reading Ease Score as a grade level. A fourth grade level corresponds to a score between 90 and 100. An eighth grade level corresponds to a score between 60 and 70. A college education corresponds to a score between 0 and 30.
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2. 2
3. 1
4. 1
5. 2
6. 1
7. 1
8. 4
9. 2
10. 3
11. 3
12. 1
13. 2

Page 4
1. **stripper**
   The suffix *er* should be circled.

   In one-syllable words ending in one vowel and one consonant, double the consonant before adding a suffix that begins with *a*, *e*, or *o*.

   **doubling**
   The suffix *ing* should be circled.

   Before adding a suffix beginning with *i*, drop the silent *e*; for example, double ⇒ doubling.
Page 4 - Continued

grains
The suffix s should be circled.

humidity
The suffix ity should be circled.

twisting
The suffix ing should be circled.

2. strip
double
grain
humid
twist

Page 5
3. The word laydown should be circled.
4. Laydown

Page 6
5. 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
Page 7
6. The words break and collapse should be circled.
7. The words strength and weakness should be circled.

Page 8
8. The words brake and break should be circled.
9. Sentence 1: brake
   Sentence 2: break

Page 9
1. (C) clean
2. (D) two or more

Page 10
3. (C) bobbin, cone, or tube
4. (C) pound

Page 11
5. (D) 840 yards
6. (A) fineness

Page 12
7. (D) short fibers, trash, and excess fibers
8. (B) defective

Page 13
Answer: g

Page 14
1. lb.
2. g
3. yd.
4. oz.
5. in.
6. ft.
JOB TASKS INSTRUCTIONAL MATERIALS
RUSSELL CORPORATION

ANSWER KEY
VOCABULARY SECTION
LESSON 1 - GENERAL VOCABULARY

Page 15
1. 209 97 777 13 10,328
2. 6 2 29 14 84

Page 16
3. 0 30 77 852 865
4. 20 ÷ 5 = 4 36 ÷ 6 = 6 0 ÷ 5 = 0
   32 ÷ 8 = 4 210 ÷ 10 = 21

Page 17
5. 16 x 28.35 = 453.6 grams

Page 18
1. 80 oz.
2. 36 in.
3. 2 yd.

Page 19
1. 453.6 g
2. 453.6 g
3. 6999.048 (ONE POUND EQUALS APPROXIMATELY 7,000 GRAINS)
4. 100 oz.

Page 20
Sample Answers
1. This symbol means to find the sum of two or more numbers; to add.
2. This symbol means approximately equal to.
3. This symbol means to find the quotient. It is the process of finding out how many times one number is contained in another. Division (÷) is the reverse, or opposite, of multiplication. For example, since 2 x 8 = 16, you will find by reversing the process that 16 ÷ 8 = 2 and 16 ÷ 2 = 8.
Page 21

4. This symbol means to find the product; to multiply. Multiplication is a short way to do addition. For example, \(4 \times 5\) means \(5 + 5 + 5 + 5 = 20\).

5. This symbol means to find the difference between two numbers; to subtract. Subtraction is the opposite of addition.

Page 22

Answer: Hosiery Cone (Coosa Ring Plant)

Page 23

1. laydown
2. hank
3. pneumafil
4. grains
5. strength

Page 24

<table>
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<th>Down</th>
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<td>pneumafil</td>
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Page 25

```
A s r y t h a e m b p
O m p e u m a f i l
U m k p m o w q s
B n e k e i n t o r n
L h o q u d a u k r i
I b a p a i n t o y a
N g h i t s i w t r
G a p r y y s p k g
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### Lesson 1 - General Vocabulary

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* Highest score possible -- 122

* 124 questions / each answer = 1 point
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(PUB-F) Publisher: Pearson / Janus / Quercus, 500 Harbor Boulevard, Belmont, CA 94002
(BK) Book

233

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<td>MATH CONCEPTS</td>
<td>NUMBER SENSE (E &amp; M)</td>
<td>WORKING WITH NUMBERS - LEVEL D (E &amp; M)</td>
<td></td>
</tr>
<tr>
<td>SUBTRACTION OF WHOLE NUMBERS</td>
<td>MATH CONCEPTS</td>
<td>NUMBER SENSE (E &amp; M)</td>
<td>WORKING WITH NUMBERS - LEVEL D (E &amp; M)</td>
<td></td>
</tr>
<tr>
<td>SUBTRACTION OF DECIMALS</td>
<td>MATH CONCEPTS</td>
<td>NUMBER SENSE (E &amp; M)</td>
<td>WORKING WITH NUMBERS - LEVEL D (E &amp; M)</td>
<td></td>
</tr>
<tr>
<td>MULTIPLICATION OF WHOLE NUMBERS</td>
<td>MATH CONCEPTS</td>
<td>NUMBER SENSE (E &amp; M)</td>
<td>WORKING WITH NUMBERS - LEVEL D (E &amp; M)</td>
<td></td>
</tr>
<tr>
<td>MULTIPLICATION OF DECIMALS</td>
<td>MATH CONCEPTS</td>
<td>NUMBER SENSE (E &amp; M)</td>
<td>WORKING WITH NUMBERS - LEVEL D (E &amp; M)</td>
<td></td>
</tr>
<tr>
<td>DIVISION OF WHOLE NUMBERS</td>
<td>MATH CONCEPTS</td>
<td>NUMBER SENSE (E &amp; M)</td>
<td>WORKING WITH NUMBERS - LEVEL D (E &amp; M)</td>
<td></td>
</tr>
<tr>
<td>DIVISION OF DECIMALS</td>
<td>MATH CONCEPTS</td>
<td>NUMBER SENSE (E &amp; M)</td>
<td>WORKING WITH NUMBERS - LEVEL D (E &amp; M)</td>
<td></td>
</tr>
<tr>
<td>MATHEMATICS CONCEPTS AND APPLICATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DECIMAL SEQUENCE AND ORDER (PLACE VALUE)</td>
<td>MATH CONCEPTS</td>
<td>NUMBER SENSE (E &amp; M)</td>
<td>WORKING WITH NUMBERS - LEVEL D (E &amp; M)</td>
<td></td>
</tr>
<tr>
<td>MEASUREMENT: THE METRIC SYSTEM</td>
<td>LESSON 25 (PB)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEASUREMENT: STANDARD (US)</td>
<td>LESSON 26 (UO)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(PB) Pan Balance
(MO) Meaning of Operations
(UO) Understanding Operations

NUMBER POWER SERIES (A)
BK 1, HOWETT, 1988, PP. 106-111
NUMBER POWER SERIES (B)
BK 2, HOWETT, 1988, PP. 104-13

(Contemporary)
The following publishers were referenced in the preceding tables:

Contemporary Books, Inc.
180 North Michigan Avenue
Chicago, IL 60601
(800) 621-1918

Fearon, Janus and Quercus
500 Harbor Boulevard
Belmont, CA 94402

Steck-Vaughn Company
P. O. Box 26015
Austin, Texas 78755
Approved Curriculum Sample

(Vocabulary and Forms Section - developed during year 3)
WORK SPECIFIC CURRICULUM PROJECT
SPECIAL 353 DEMONSTRATION PROJECT
LESSON APPROVAL FORM

PLEASE COMPLETE AND RETURN TO:
Paula S. Smith, M.Ed.
Center for Vocational & Adult Education
243 Wallace Building
Auburn University, AL 36849-5526

LEVEL

LESSON TOPIC
Carding Common Vocabulary

LESSON NUMBER
3

DATE RECEIVED FROM AUBURN
4/10/95

1. The lesson is technically correct. X YES ___ NO

If no, list your suggestions and corrections below.
A. 
B. 
C. 

2. The lesson teaches the topic addressed. X YES ___ NO

If no, please write your comments and suggestions below.
A. 
B. 
C. 

3. The answers to the lesson are correct. X YES ___ NO

If no, corrections should be noted below.
A. 
B. 
C.
4. The supplementary materials are adequate.  
   - YES  - NO
   If no, list other materials.
   A.
   B.
   C.

5. This lesson is appropriate for public dissemination.  
   - YES  - NO

6. This lesson may be disseminated with Russell Corporation’s name in the lesson heading.  
   - YES  - NO

7. Other Comments:

Reviewed and edited by Russell Corporation

Reviewed by: Jeff Alexander (Russell Corporation)
Date: 4/14/95
(This date should be within 30 days -- after date received.)

Approved by: Dick Debraj (Russell Corporation)
Date: 4/25/95
(This date should be within 30 days -- after date received.)
Russell Corporation
Basic Competency Skills
Lesson 3

This lesson was designed to help Russell Corporation employees acquire the ability to:

1. Structure sentences (pp. 67, 70, 71)
2. Use context clues (p. 67)
3. Demonstrate word alphabetization (p. 90)
4. Distinguish between a sentence and a fragment (p. 80)
5. Solve analogies (pp. 97, 98)
   Instructor Manual - exercise #4
6. Word map (pp. 100, 101)
7. Identify parts of speech -- nouns (p. 95)
8. Follow directions (throughout lesson)
9. Develop vocabulary (throughout lesson)
10. Read using comprehension skills (pp. 69, 78, 79, 80, 86, 93, 100)
11. Classify information (p. 90)
12. Distinguish cause from effect (p. 77)
Lesson 3 (continued)

13. Summarize information (p. 84)

14. Write a paragraph (pp. 75, 84, 101)

15. Interpret a diagram (p. 84)

16. Compare and contrast information (p. 88)

17. Identify safe work procedures (pp. 74, 86)
   Instructor manual - exercise #3
RUSSELL CORPORATION
SUGGESTED INSTRUCTION
GUIDELINES
Lesson 3

Introduction of concepts
Expand the participants' background experience with workplace vocabulary. Ask the participants to turn to page 66. Instruct them to read the vocabulary list and circle the words or phrases that they are not familiar with. Write these words on a board or flipchart. Look them up in the work specific dictionary at the end of lesson 3, (p. 102). Discuss the meaning and purpose of each word or phrase. If possible, have a visual of the word or phrase. It may be necessary to tour the plant and/or locate a picture in a machine operator's manual.

Direct Instruction (prior to beginning pp. 73-76)
Discuss the importance of preventive measures. Prevention means trying to keep something from happening. We use prevention in all aspects of our lives.

Examples:
- Car problems are prevented by changing the oil, checking the tire pressure, etc.
- Annual check-ups are to help detect physical problems in their infancy.
- We brush our teeth to help prevent decay.

Exercise #1 (group)
Ask participants to discuss:
- Preventive measures they take every day (at home)
- Preventive measures they take every day (at work)
- What would happen if the preventive measures were not taken

(continued on next page)
Lesson 3

Exercise #1 (continued)
The instructor should help the discussion evolve to one of cause-and-effect relationships. One possible transition might be: "If a preventive measure is not taken (cause) the result may be a problem (effect)."

After all participants are comfortable with preventive measures and cause-and-effect relationships instruct the participants to complete pages 73-77.

Exercise #2 (group)

After participants complete pages 78 and 79 write the following on the board or flipchart:

<table>
<thead>
<tr>
<th>sender</th>
<th>message</th>
<th>receiver</th>
<th>feedback</th>
</tr>
</thead>
</table>

Circle the word message. Explain to the participants that a message can be oral, written, or non-verbal (discuss each type).

An oral message involves spoken words (including voice inflections).
A written message involves written words.
A non-verbal message involves body language.

Lesson 3

Exercise #3 (group)

Prior to working on pages 82-94:

- Lead participants in a discussion about carding machine safety. Ask participants to share carding machine safety tips. Ask participants to discuss the dangers associated with operating a carding machine.

- Arrange for a demonstration of the safety procedures to follow while operating a carding machine. Encourage participants to ask questions during the demonstration.

- Ask the demonstrator to point out the “stop” or “off” switch.

Exercise #4 (individual and group)

After completing pages 97 and 98 ask participants to write 4 analogies on a piece of paper. Instruct them not to complete the analogies (leave the last one blank). They should be written in the following format:

boy : girl :: man : __________

After writing the analogies, they should trade papers with another participant and try to complete the analogies that person has written. Ask the participants to write some of the analogies on the board or flipchart.

Reference Pre-GED Critical Reading Skills, Contemporary Books, pp. 91-94
Lesson 3

Exercise #5 (Individual and group)

Critical Thinking Exercise
Connect the dots using only 4 lines (do not lift your pencil). Make copies of the following pattern. Give each participant a copy.

A work specific dictionary is located at the end of this lesson. It may be used as a reference.
Carding Common Vocabulary Words.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>calender rolls</td>
</tr>
<tr>
<td>2.</td>
<td>chute</td>
</tr>
<tr>
<td>3.</td>
<td>coiler head</td>
</tr>
<tr>
<td>4.</td>
<td>condenser</td>
</tr>
<tr>
<td>5.</td>
<td>crush rolls</td>
</tr>
<tr>
<td>6.</td>
<td>doffer</td>
</tr>
<tr>
<td>7.</td>
<td>feed roll</td>
</tr>
<tr>
<td>8.</td>
<td>flats</td>
</tr>
<tr>
<td>9.</td>
<td>laydown or mix</td>
</tr>
<tr>
<td>10.</td>
<td>licker-in</td>
</tr>
<tr>
<td>11.</td>
<td>mat</td>
</tr>
<tr>
<td>12.</td>
<td>opening line</td>
</tr>
<tr>
<td>13.</td>
<td>screens</td>
</tr>
<tr>
<td>14.</td>
<td>sliver</td>
</tr>
<tr>
<td>15.</td>
<td>take-off roll</td>
</tr>
<tr>
<td>16.</td>
<td>trash</td>
</tr>
<tr>
<td>17.</td>
<td>trash removal</td>
</tr>
<tr>
<td>18.</td>
<td>trumpet</td>
</tr>
<tr>
<td>19.</td>
<td>web</td>
</tr>
</tbody>
</table>
Information Box

Carding is a process in the manufacturing of spun yarns. During carding the fiber is opened, cleaned, and aligned. It is also formed into a continuous untwisted strand called a sliver.

1. Read the information box above. What does the word **fiber** refer to? Write your answer in a complete sentence.

__________________________

__________________________

__________________________

__________________________
The Opening Line

The opening line is a set of machines used to open and clean the cotton before it is processed.
Opening the Fiber

Step 1. The fiber passes through the screen rolls. The screen rolls are made of coarse wire. They help form the loose fiber into a mat. Here trash is removed. Trash may be pieces of the cotton plant that can not be used.

Step 2. The mat goes through another set of rollers. The second set of rollers removes more trash.

Which way does the machine pictured above move? (circle the answer)
(a) from right to left    (b) from left to right

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page 69

picture courtesy of Bibb Manufacturing Company
Trash

Trash may be pieces of the cotton plant that can not be used by Russell Corporation. For example, the **leaf** of the cotton plant can not be used.

Write another part of the cotton plant that can’t be used.

Write a complete sentence about the part you listed above.
Trash Removal System

The trash removal system is made up of large fans and filters. The fans and filters help vacuum the trash from the cards. The vacuumed trash goes to a baler.

In lesson 2, we learned the word waste. Are waste and trash the same thing?

__________
(write yes or no)

When is waste not trash? (Write your answer in a complete sentence.)

__________

__________

__________

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**Matching**

Match each word in *Column A* with its definition in *Column B*. Draw a line from the word to its definition.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. cotton</td>
<td>a. to line up</td>
</tr>
<tr>
<td>2. align</td>
<td>b. pieces of the cotton plant that can not be used</td>
</tr>
<tr>
<td>3. screen rolls</td>
<td>c. a natural fiber</td>
</tr>
<tr>
<td>4. trash</td>
<td>d. a continuous strand of loosely assembled fibers without twist</td>
</tr>
<tr>
<td>5. sliver</td>
<td>e. coarse wire rolls that form staple into a lap and remove trash</td>
</tr>
</tbody>
</table>
Preventive Maintenance

Preventive maintenance means taking care of a thing to keep it from breaking.

It’s just like getting the oil changed in your car. Your car’s engine may be running fine. You get the oil changed to make sure it keeps running.

Russell Corporation uses preventive maintenance to help keep their machines running.

List some things you do on the job for preventive maintenance reasons.
Preventing Injuries

Safety rules are made to prevent people from getting hurt. At Russell Corporation wearing earplugs is a safety rule. They help prevent a person’s ears from being hurt.

List 3 other ways people are prevented from being hurt at Russell Corporation?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Preventing Mistakes

One way we try to prevent mistakes is by communicating with others on the job. During shift changes, the people coming and going communicate with each other. If the two people do not communicate, mistakes may happen.

Pretend you are ending your shift at Russell Corporation. Jim is coming on to replace you. Write a paragraph explaining the things you must tell him before he begins his shift.

_________________________________

_________________________________

_________________________________

_________________________________

_________________________________

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page 75
On the preceding page you wrote a paragraph explaining what Jim should know. Jim did not listen well.

List at least three things that might go wrong because Jim didn’t listen.

1. __________________________
   __________________________

2. __________________________
   __________________________

3. __________________________
   __________________________
**Cause-and-Effect**

In a cause-and-effect relationship the cause is what makes the effect happen.

**Example:** Flipping the off switch will make the machine stop.

The **cause** is flipping the off switch.  
The **effect** is the machine stops.

**Directions:**  
Draw a line from each cause to its effect.

<table>
<thead>
<tr>
<th><strong>Cause</strong></th>
<th><strong>Effect</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. not wearing earplugs</td>
<td>remembering important information</td>
</tr>
<tr>
<td>2. taking notes</td>
<td>fewer machine break downs</td>
</tr>
<tr>
<td>3. preventive maintenance</td>
<td>damaged ears</td>
</tr>
</tbody>
</table>
The four main parts of communication are: sender, message, receiver, and feedback.

The **sender** is the person who says or writes something.

The **message** is what was said or written.

The **receiver** is the person to whom the message is sent.

**Feedback** is how the receiver and the sender know the message was understood.
**JOB TASK INSTRUCTIONAL MATERIALS**  
**RUSSELL CORPORATION**  
**LESSON 3 - CARDING COMMON VOCABULARY**

- **Sender** is the person who says or writes something.
- **Message** is what was said or written.
- **Receiver** is the person to whom the message is sent.
- **Feedback** is how the receiver and the sender know the message was understood.

**Directions:**  
Answer the questions based on the statements in the boxes below.

**You got a memo from your supervisor about vacation time.**

1. Who is the sender? ________________________
2. Who is the receiver? ________________________
3. What is the message? ________________________

**Bob told Sue the machine was not working properly.**

4. Who is the sender? ________________________
5. Who is the receiver? ________________________
6. What is the message? ________________________
Note-taking is writing down word phrases to help jog your memory. *You do not have to write notes in complete sentences.* Notes are mainly to help you remember things.

If you are writing official letters or memos you should use complete sentences. Sometimes it is difficult for other people to read and understand notes.

**Directions:** Read each situation below. Write N in the blank if it is from a note (with word phrases). Write L in the blank if it is from a letter (with complete sentences).

1. Safety meeting Friday. 10:00 am - Break room

2. The carding machine is not operating correctly. A technician needs to check it.
A Basic Carding Machine

High Speed Carding and Continuous Card Feeding
Zoltan S. Szaloki 1977
There are many parts on the carding machine. Some of the parts are:

- Chute
- Feed Roll
- Licker-in
- Flats
- Cylinder
- Doffer
- Calendar Rolls
- Coiler Head

Now, we will find each part on the machine. We will also find out how each part functions.
**Chute:** The chute forms opened fibers into an even mat. The mat is fed into the card machine.

**Feed roll:** The feed roll is the first roll to meet the cotton.

**Licker-in:** The licker-in takes small pieces of fiber from the feed roll. It puts the fiber on the cylinder.
Reading a Diagram

A diagram is a picture with labels. It shows how parts work together. The diagram on page 83 shows how a carding machine works.

Directions: Write a paragraph explaining how the chute, feed roll, and licker-in work together. Use complete sentences and correct punctuation.
**Flats:** Flats are located over the cylinder. They revolve on a chain opposite of the way the cylinder is turning. Flats help align and clean the fibers.

**Cylinder:** The cylinder is a large cast iron shell covered with wire teeth. The cylinder rotates very fast.

**Doffer:** The doffer is next to the cylinder. It turns opposite of the cylinder. Its main job is to pull cotton off the cylinder.

---

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A Basic Carding Machine

High Speed Carding and Continuous Card Feeding

Zoltan S. Szaloki 1977
Important Safety Information

The carding machine has been involved in many serious accidents. Only trained employees should run a carding machine. The carding machine operator must be familiar with the controls and safety rules.

The cylinder, doffer and licker-in turn at very high speeds. Even after the power is turned off it takes a while for the parts to stop. It is important to make sure all of the parts are stopped before the machine is cleaned or repaired.

Directions:

1. Circle other dangerous parts on the carding machine on page 85.
2. Draw the approximate location of the stop or off switch on the carding machine on page 85.
Directions: Look at the pictures below. Label the cylinder and the flats on both pictures.
Look at the pictures on page 87.

Notice the shape of the flats and the cylinder.

List 3 other things you use at work that are flat.

List 3 other things you use at work that are cylinder-shaped.
**A Basic Carding Machine**

**Coiler Head:**
The coiler head puts sliver into

**Calender Rolls:**
The calender rolls are two smooth, steel rolls to pull sliver into the trumpet.
There are many work-related words in this box. Circle **only** the words related to carding:

<table>
<thead>
<tr>
<th>Chute</th>
<th>Earplugs</th>
<th>Draw Box</th>
<th>Break Back</th>
<th>Feed Roll</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumafil</td>
<td>Licker-in</td>
<td>Grains</td>
<td>Flats</td>
<td>Nipper</td>
</tr>
<tr>
<td>Cylinder</td>
<td>Comber Noils</td>
<td>Skein</td>
<td>Doffer</td>
<td>Humidi</td>
</tr>
<tr>
<td>Delivery</td>
<td>Calendar Rolls</td>
<td>Hank</td>
<td>Coiler Head</td>
<td></td>
</tr>
</tbody>
</table>

**Directions:** Put the carding words you circled in alphabetical order.

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 

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page 90
Label the parts of the carding machine on page 92.

<table>
<thead>
<tr>
<th>Chute</th>
<th>Coiler Head</th>
<th>Doffer</th>
<th>Feed Roll</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licker-in</td>
<td>Cylinder</td>
<td>Calender Rolls</td>
<td>Flats</td>
</tr>
</tbody>
</table>
A Basic Carding Machine

High Speed Carding and Continuous Card Feed

Zoltan S. Szaloki 1977
We have five more parts to define. These parts are **not** shown in detail on the picture. We will try to find where each part goes. Read the definition for each part. Look for clues in the definition that will help you decide where each part goes. Label each part on the picture on page 94.

**Take-Off Roll:** The take-off roll takes cotton off the doffer. It helps form the cotton into a web.

**Web:** A web is a thin mat of fibers. The take-off roll forms the web.

**Crush Rolls:** Crush rolls are two smooth, steel rolls that remove the web from the take-off roll. Crush rolls crush large pieces of trash into smaller pieces. The small pieces of trash are called pepper trash.

**Trumpet:** A trumpet is a cone-shaped part. The web goes from the crush rolls into the trumpet. It comes out as sliver.

**Sliver:** Sliver is a rope-like form of cotton fibers. It goes from the trumpet into the coiler head.
NOUNS

A noun is a person, place, thing, or idea.

Since the parts of the carding machine are things, they are nouns.

Directions:

☆ Complete the sentences below.
☆ You may use the work-specific dictionary or the preceding pages.
☆ Hint: The missing words are nouns.

1. The first roll to meet the cotton as it enters the carding machine is the ________________.

2. The ________________removes small pieces of fiber from the feed roll. It puts the fibers on the __________.

3. The main job of the doffer is to pull ________________ off the cylinder.
Several carding words are hidden below. The words may be hidden in all directions (even backwards or diagonally). Circle the following words:

<table>
<thead>
<tr>
<th>Doffer</th>
<th>Mix</th>
<th>Coiler head</th>
<th>Condenser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste</td>
<td>Opening line</td>
<td>Flats</td>
<td>Take-off Rolls</td>
</tr>
<tr>
<td>Web</td>
<td>Sliver</td>
<td>Mat</td>
<td>Trash Removal</td>
</tr>
<tr>
<td>Trumpet</td>
<td>Licker-in</td>
<td>Calender Rolls</td>
<td></td>
</tr>
<tr>
<td>Screens</td>
<td>Chute</td>
<td>Feed roll</td>
<td></td>
</tr>
</tbody>
</table>
Analogies

The comparisons of relationships between words are called analogies. An analogy looks like this:

Russell : textiles :: Michelin : tires

One set of dots (:) means is to. Two sets of dots (::) means as. Therefore, when we substitute words for dots it looks like this:

Russell is to textiles as Michelin is to tires

This means that Russell is related to textiles in the same way that Michelin is related to tires. Russell is in the textile business and Michelin is in the tire business.
**Analogies**

**Directions:** Read each analogy below. Circle the letter of the word that best completes the analogy. Write the word on the blank line. You may use a dictionary.

1. web : trumpet :: staple : ______
   
   (hint: Web goes into the trumpet.)
   
   a. cylinder
   
   b. chute
   
   c. licker-in

2. word phrases : note taking :: sentences : ______
   
   a. reminder notes
   
   b. lists of things to do
   
   c. official letters
For Your Information

**ADT** - Security or fire system

The letters ADT stand for American District Telegraph, which is the name of the company that supplies the systems.
Word Mapping

A word map is a chart to help you list your thoughts about a word or topic. A word map can help you organize your thoughts.

1. Write the word or topic in the center of a sheet of paper.
2. Draw a circle around the word or phrase.
3. As you think about the word or topic, other words or phrases will come to mind.
4. Write all of these words or phrases on the paper.
5. Draw a connecting line from each word or phrase to the circled word. This completes your word map.
6. You are now ready to write a paragraph about the word or topic.

Example: The phrase cotton processing may bring to mind other words and phrases like: “opening”, “carding”, “drawing”, “combing”, “roving”, “spinning”, etc.
Directions: In the space below, make a word map for "carding machine".

Use the word map you created to help write a paragraph about the carding machine.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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page 101
Work Specific Dictionary
Russell Corporation
Carding Common Vocabulary

10/1994
page 102
Carding Common Vocabulary Words

1. calender rolls
2. chute
3. coiler head
4. condenser
5. crush rolls
6. doffer
7. feed roll
8. flats
9. laydown or mix
10. licker-in
11. mat
12. opening line
13. screens
14. sliver
15. take-off roll
16. trash
17. trash removal
18. trumpet
19. web
1. **Calender rolls** are two smooth, steel rolls that pull sliver through the trumpet.

2. A **chute** takes opened fibers and forms them into an even mat. These fibers are fed into the card machine.

3. A **coiler head** is a mechanical device. It puts the sliver into a container.

4. The **condenser** is a fan type device. It blows the opened fibers from one machine to the next. It uses air currents to move the fibers.

5. **Crush rolls** are two smooth, steel rolls that remove the web of fibers from the take-off rolls. These rolls crush large pieces of trash into very small pieces of trash. The small pieces are called pepper trash.

6. The **cylinder** is a large cast iron shell covered with wire teeth. The cylinder rotates very fast.
7. The **doffer** turns opposite the cylinder. Its main function is to pull cotton off the cylinder.

8. The **feed roll** is the first roll to meet the cotton as it enters the carding machine.

9. Flats are located over the cylinder. They revolve on a chain opposite of the way the cylinder is turning. Flats help in aligning and cleaning the fibers.

10. **Laydown or mix** refers to bales of fiber of a particular kind, size, micronaire, etc.

11. The **licker-in** is a roll located between the feed roll and the cylinder. The licker-in removes small pieces of fiber from the feed roll. It puts the pieces on the cylinder.

12. **Mat** is the end product of the chute and the beginning product for the card. Mat is the uniform grouping of cotton.

10/1994
page 105
13. The **opening line** is a set of machines used to open and clean the cotton before it is processed.

14. **Screens** are under the cylinder and doffer. They allow trash to be pulled away by air currents.

15. **Sliver** is a rope-like form of cotton fibers.

16. The **take-off roll** takes cotton fibers off the doffer. It transforms the fibers into web.

17. **Trash** is the part of the cotton plant that can not be used.

18. The **trash removal** system is made up of large fans and filters. The fans and filters help vacuum the trash from the cards. The vacuumed trash goes to a baler.

19. A **trumpet** is a cone shaped part on many machines. It condenses a web of fibers into sliver.
20. **Web** is a thin mat of aligned fibers when it leaves the doffer.
CARDING COMMON VOCABULARY
LESSON 3 - ANSWER KEY
Page 67
Answers will vary.

Page 69
Step 2 then Step 1
(a) right to left

Page 70
Possible answers include
stem, stalk, seed, etc.

Page 71
No
Waste can be reworked, but
trash is completely
unusable.

Page 72
1. c
2. a
3. e
4. b
5. d

Page 73
Answers will vary.

Page 74
Answers will vary.

Page 75
Answers will vary.

Page 76
Answers will vary.

Page 77
1. damaged ears
2. remembering important information
3. few machine break downs
Page 79
1. supervisor
2. you
3. memo about vacation
time
4. Bob
5. Sue
6. machine was not
working properly

Page 80
1. N
2. L

Page 84
Answers will vary.

Page 88
Answers will vary.

Page 90
Calender rolls
Chute
Coiler head
Cylinder
Doffer
Feed roll
Flats
Licker-in
( Participants may include additional
words such as earplug, etc. As long
as the rationale is logical accept the
answers.)
Page 92
1. feed roll
2. licker-in, cylinder
3. cotton

Page 94

Page 95
1. feed roll
2. licker-in, cylinder
3. cotton

Page 96

Page 98
Answers will vary.

Page 101
Answers will vary.
RUSSELL CORPORATION - LESSON 3

READABILITY TEST FOR VOCABULARY WORDS AND DEFINITIONS
Method

Gunning's Fog Index, Flesch-Kincaid Score, Flesch Reading Ease Score, and Flesch Reading Ease Grade Level

1. **Gunning’s Fog Index** indicates how difficult the document is to read, based on the averages for sentence lengths and the number of multi-syllable words in sentences. The higher the index, the more difficult the document is to read.

2. **Flesch-Kincaid Score** indicates the Fog Index as a grade level. The higher the score, the more difficult the document is to read.

3. **Flesch Reading Ease Score** indicates how easy it is to read and understand the document, based on the average number of words per sentence and the average number of syllables per 100 words. The higher the score, the easier the document is to read and understand.

   The highest score is 100, which indicates the document is very easy to read and understand. An average score is between 60 and 70. A low score is between 0 and 30, which indicates the document is very difficult to read and understand.

4. **Flesch Reading Ease Grade Level** indicates the Flesch Reading Ease Score as a grade level. A fourth grade level corresponds to a score between 90 and 100. An eighth grade level corresponds to a score between 60 and 70. A college education corresponds to a score between 0 and 30.
Readability Statistics

Totals
  Words  1106
  Sentences  114
  Paragraphs  0
  Syllables  1635
  3-syllable words  21

Averages
  Words per sentence  9.7
  Sentences per paragraph  0

Readability
  Gunning’s Fog Index  8
  Flesch-Kincaid Score:  5.53
  Flesch Reading Ease Score:  77
  Flesch Reading Ease Grade Level:  5

Interpreting the Flesch Reading Ease Score
A Reading Ease Score of 77 means the reading difficulty is fairly easy for most readers. This score is associated with a 6th grade reading level.
<table>
<thead>
<tr>
<th>Words in Context</th>
<th>Reading for Meaning Insight Level II</th>
<th>Reader's Choice Insights</th>
</tr>
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<tr>
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<td>4.8,12,14,20,22,28,30,36,38,44,46,52,54,80,82,86,88,92,94 (E, M)</td>
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<td>Reading Book 1 123-124 (M)</td>
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</table>

- Readers 1, 2, and 3 are available in this lesson.
- Readers 4 and 5 are available in a future lesson.
- Readers 6 and 7 are available in a future lesson.

**Extra notes:**
- **Supplementary Materials**
- **Level II Reader's Choice**
- **Building Basic Skills**
- **Resdina Book 1**
- **Great Series**
- **Great Disasters**
- **Great Escapes**
- **Great Mistakes**
- **Great Adventures**
- **Great Firsts**
- **Great Heroes**
- **Great Challenges**
- **Reading for Today**
- **Olympic Games**
- **Nobel Prize**
- **Winners**
- **Halls of Fame**
- **Great Firsts**
- **Building Basic Skills**
- **Reading Skills for Adults**
- **Great Series**
- **Great Disasters**
- **Great Escapes**
- **Great Mistakes**
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## LESSON 3 - CARDING COMMON VOCABULARY

### SUPPLEMENTARY MATERIALS

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### Sentence Combining

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### Paragraph Development

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<td>20,22,24 (M)</td>
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<td>Working With Numbers</td>
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<th>Levels A, B &amp; C</th>
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<td>Identify Safe Work</td>
<td>Pre-GED Critical Reading Skills</td>
<td>Pre-GED Strategies for Success - Reading 77-78 (E)</td>
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<td>Procedures</td>
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<td>Life School: A Pacemaker Program - Binder 2 Health - Unit 5 (A,B,C) (Globe Fearon Publishing Company) Multi-Media Kit of Essential Knowledge - Basic First Aid and Illness Unit (C) (Phillip Roy)</td>
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<th>Alphabetize Words</th>
<th>Level I: Spelling</th>
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</table>
The following publishers were referenced in the preceding tables:

**Contemporary Books, Inc.**  
180 North Michigan Avenue  
Chicago, IL  60601  
(800) 621-1918

**Globe Fearon Publishing Company**  
241 Frisch Court 3rd Floor  
Paramus, NJ  07652  
(800) 848-9500

**Phillip Roy**  
P.O. Box 130  
Indian Rocks Beach, FL  34635  
(800) 255-9085

**Steck-Vaughn Company**  
8701 North Mopac Expressway  
Austin, TX  78759  
(512) 343-8227
# WORK SPECIFIC CURRICULUM PROJECT

SPECIAL 353 DEMONSTRATION PROJECT

LESSON APPROVAL FORM

**PLEASE COMPLETE AND RETURN TO:**

Paula S. Smith, M.Ed.
Vocational & Adult Education
243 Wallace Building
Auburn University, AL 36849-5526

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>LESSON TOPIC</th>
<th>LESSON NUMBER</th>
<th>DATE RECEIVED FROM AUBURN</th>
</tr>
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</table>

1. The lesson is technically correct.  
   - **YES**  - **NO**
   
   If no, list your suggestions and corrections below.
   A. 
   B. 
   C. 

2. The lesson teaches the topic addressed.  
   - **YES**  - **NO**
   
   If no, please write your comments and suggestions below.
   A. 
   B. 
   C. 

3. The answers to the lesson are correct.  
   - **YES**  - **NO**
   
   If no, corrections should be noted below.
   A. 
   B. 
   C.
4. The supplementary materials are adequate.  ☑ YES  ☐ NO
   If no, list other materials.
   A.
   B.
   C.

5. This lesson is appropriate for public dissemination.  ☑ YES  ☐ NO

6. This lesson may be disseminated with Russell Corporation's name in the lesson heading.  ☑ YES  ☐ NO

7. Other Comments:

Reviewed and edited by Russell Corporation

Reviewed by: David Major (Russell Corporation)
Date: 2/21/95
(This date should be within 30 days -- after date received.)

Approved by: David Jackson (Russell Corporation)
Date: 3/1/95
(This date should be within 30 days -- after date received.)
Russell Corporation
Basic Competency Skills
Lesson 4

This lesson was designed to help Russell Corporation employees acquire the ability to:

1. Structure sentences (pp. 120, 129, 138, 141)
2. Identify parts of speech -- nouns and verbs (pp. 127, 140)
3. Recognize abbreviations and symbols (p. 139)
4. Follow directions (throughout lesson)
5. Develop vocabulary (throughout lesson)
6. Read using comprehension skills (p. 138)
7. Classify information (pp. 114-121)
8. Read and understand flowcharts (pp. 130-136)
9. Construct flow charts (p. 130)
10. Compare and contrast information (pp. 23, 124)
11. Recognize suffixes (pp. 125, 126)
12. Recognize prefixes (pp. 109-113, 126)
13. Use homophones (p. 137)
Lesson 4 (continued)

14. Locate information using a dictionary (pp. 121, 128, 129, 141, 142)

15. Scan information (p. 142)

16. Understand diameter (pp. 112, 119)

17. Recognize common words and meanings (pp. 110)
RUSSELL CORPORATION
SUGGESTED INSTRUCTION GUIDELINES
Lesson 4

Introduction of concepts
Expand the participants' background experience with workplace vocabulary. Ask the participants to turn to page 108. Instruct them to read the vocabulary list and circle the words or phrases that they are not familiar with. Write these words on a board or flipchart. Look them up in the work specific dictionary at the end of lesson 4 (p. 145). Discuss the meaning and purpose of each word or phrase. If possible, have a visual of the word or phrase. It may be necessary to tour the plant and/or locate a picture in a machine operator's manual.

Direct Instruction (prior to beginning page 114)
Demonstrate how to read a ruler. Discuss the difference between the length of an object and the diameter of an object (diameter = straight line through the center of a circle).

Exercise #1 (individual and group)
You will need several rulers for this exercise. Give each participant or group of participants (max. of 2 per group) a ruler and a list of items to measure. The items should be located in the classroom. Include on the list measuring the diameter of at least 3 items. Possible items to measure may include:

- Diameter of the top of a cup or cola can and length of the cup or can
- Diameter and length of a round pencil or pen
- Diameter of one of the circles on a phone receiver
- Length of a piece of paper
- Length of a paper clip
- Length of a desk
Lesson 4

Exercise #1 (continued)
After everyone or every group has measured the items discuss:

- the measures the groups got for the same objects
- why groups got different measures
- other items that can be measured lengthwise or diametrically (make a list on the board or flipchart)

After all participants are comfortable with measuring length and diameter instruct the participants to complete pages 114-120.

Exercise #2 (individual and group)
Ask participants to write three sentences using vocabulary words on a piece of notebook paper. Instruct the participants to erase the vocabulary word and exchange papers with another learner. Each will read the sentences they received and write in the appropriate vocabulary words. They should then return the papers and work together to clarify the sentences as needed.
Lesson 4

Exercise #3 (individual and group)
Students have been asked to write in complete sentences on pages 120, 129, 138, and 141. Prior to beginning page 120, review the following areas:

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

Discuss the items above as a group. List the rules/guidelines that the group generates on the board or flipchart.

Exercise #4 (group)

Password is an excellent game for vocabulary development. It can be played with teams of two or more players.

Give one player on each team a card with a “secret word” on it that is not seen by the other partners. (Select vocabulary words from this lesson and previous lessons.) Players with the secret words take turns calling out to their partners one-word clues to help them guess the word. Teams should alternate in starting, and players should alternate in giving clues. The winning teams can be the one that guesses the most secret words or accumulates the most points (five points for getting a word on the first clue, four points on the second, etc.).
Lesson 4

Exercise #5 (group)

A brainstorming session will give participants the opportunity to engage in a creative problem-solving exercise. As a class do a sample brainstorm session lasting from one to two minutes. To help get the creative juices flowing the sample brainstorming topic should be simple such as:

- listing all the possible uses for a paper clip
- listing ways to improve the standard pencil
- listing the possible uses for a piece of paper

Before beginning the sample session, the four basic rules of brainstorming should be written on the board or flipchart. They include:

1. No critical judgment is permitted
2. Free-wheeling is welcomed (i.e., the wilder the idea, the better)
3. Quantity, not quality, is desired
4. Combination and improvement of ideas are sought

(Continued)
Exercise #5 (continued)
After the group sample session, divide the participants into groups of four to six people. Give each group sixty seconds to brainstorm about one of the following job related topics:

- Safety on the job
- Uses for cotton
- Motivation techniques (how to get excited about work)
- Getting along with other people at work

One person in each group should tally the number of ideas, not necessarily the ideas themselves. At the end of one minute ask the groups to report the number of ideas they generated and some examples of the seemingly "crazy" or "wild" ideas. Suggest that sometimes seemingly crazy ideas might turn out to be very workable.

Exercise #6 (individual and group)
For this exercise obtain a copy of the Russell publication, "We start it ... We finish it" for each person in the class. In this publication there is a modified flow chart that explains the process of cotton manufacturing from selecting the cotton to finished products (a copy of the chart is on the following page). The flow chart does not follow the exact rules listed on page 131 of the participants' workbooks. Point out that even though the guidelines on page 131 are technically correct, all charts do not strictly follow them. Discuss the points on the charts where decisions need to be made. If possible obtain examples of other types of flow charts and discuss the similarities and differences as a class. There is a section on flow charts in the Glencoe book Pre-GED Reading Skills for Social Studies and Science on pages 63-64.
Lesson 4

Exercise #7 (individual)
Give each participant a copy of the crossword puzzle on the following page. The answers are given below.
Complete the crossword puzzle below. You may use the work specific dictionary at the end of this lesson.

ACROSS
1. To refill stock; or a frame for holding sliver.
2. A machine for separating, aligning, and delivering fibers in a sliver form.
3. Left over fibers from different processes.
4. A measure of the length of cotton fibers.
5. Small knots of fiber that will not straighten to a parallel position.
6. Refers to bales arranged in a particular order.

DOWN
1. A cone shaped part on many machines.
2. A part of the air cleaning system.
3. A pan located under the carding machine. It is used to weigh fibers in the blending process.
5. Bales of a particular kind, size, color, micronaire, etc.

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CARDING TECHNICAL VOCABULARY
A work specific dictionary is located at the end of this lesson. It may be used as a reference.
Carding Technical Vocabulary Words

1. air
2. bale
3. blend
4. blend-o-mat
5. blow down
6. card
7. choke
8. cotton
9. creel
10. doff
11. drawing
12. dust house
13. dust mask
14. ear plug
15. hopper
16. laydown
17. micronaire
18. multimixer
19. neps
20. staple length
21. trumpet
22. waste
23. weigh pan
24. weight
Prefixes

- A prefix is a syllable added to the beginning of a word.
- Adding a prefix to a word changes its meaning.

For example, the word even means balanced. When the prefix “un” is added the word changes to uneven. Uneven means not balanced.

The prefix “un” means not.
Prefixes

Parallel means being equal distance apart and laying side by side.

These fibers are parallel.

These fibers are not parallel.

What would we call the fibers that are not parallel? Circle the answer. Hint look for the prefix that means not.

reparallel unparallel preparallel
The Prefix "Micro"

Micro means very small.

A **microscope** is a device used to look at very small objects. Microscopes are like magnifying glasses. They make very small things look larger.

A **microwave** is a very short electronic wave of energy. A microwave oven uses short electronic waves of energy to cook food.
**Micronaire**

A single cotton fiber is very small. A cotton fiber is shown in the picture. Remember in real life the fiber is much smaller. It is about the size of a hair.

![Diagram of Micronaire](image)

**Micronaire** refers to the fineness of the cotton fiber. It is a measurement of the diameter of the cotton fiber. *Diameter is a straight line drawn through the center of a circle.*

![Diagram of Micronaire Diameter](image)

**Micronaire** is very small. It is the thickness of a single cotton fiber. It is like the thickness of a hair.
Prefixes

The prefix “multi” means many.

A multimixer is a machine that mixes many fibers.

Fill in the missing prefixes below.
You may look at the preceding pages.

1. If a worker is not productive, we would say he is ___ productive.

2. Cotton fabric can be used for many purposes. It is a ___ purpose good.

3. To weigh very small items we use a ___ scale.
Classifying

Classifying means putting things in groups or categories. Items put in the same group usually share a common trait.

Some things that can be classified include:

Jobs
The department you work in can be classified (carding, drawing, spinning). Another classification is your job title (machine operator, technician, supervisor).

Food
The FDA (Food and Drug Administration) classifies meat, eggs, cheese and other foods. It is important to know how the foods we eat are classified. We only want to eat safe foods.
Classifying

Classifying means putting things in groups or categories.

Let's practice classifying.

1. Most of the words below share a common trait. Draw an X through the word that does not belong.
   
   shirts   socks   books   pants

2. Write a category name for each group of words below. The first one has been done as an example.
   
   a. Carding, machine parts
      doffer   cylinder   flats   chute
   b. ____________________________
      Russell Athletic, Jerzees, Cross Creek
   c. ____________________________
      opening   carding   drawing   combing

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Classifying Cotton
Classifying Cotton

Cotton is classified based on important qualities. The three most common classes in the American system are: grade, staple length, and character.

GRADE
The grade includes the color, leaf, and preparation. (preparation means how the cotton was ginned)

STAPLE LENGTH
The staple length is the length of the cotton fibers.

CHARACTER
The character refers to the fineness (micronaire) and strength of the cotton fibers.

Our vocabulary words for this section include staple length and micronaire. Let's look at these two areas more closely.
Cotton is classified in different ways.

**Staple length** is a measure of how long the cotton fibers are.

The picture shows different staple lengths.

List two other things (at work or home) that can be measured lengthwise. *For example lumber can be measured lengthwise.*

1. __________________  2. __________________
Micronaire refers to the fineness of the cotton fibers. It is a measurement of the diameter of the cotton fibers. Diameter - a straight line drawn through the center of a circle.

Directions
Read the statements below. Write the missing words in the blanks.

1. _________________ is a measure of the diameter of cotton fibers.

2. _________________ is a measure of the length of cotton fibers.
Classifying

We have learned to classify cotton by staple length and micronaire. Let’s classify some other things. Look at the pictures below. Draw an X through the picture that does not belong.

Write a sentence telling why the picture does not belong.

Anything can be classified: jobs, food, cotton, pictures and even vocabulary words. Turn the page to practice classifying some of our carding vocabulary words.
Classifying Vocabulary Words

Directions

1. Use the work-specific dictionary on pages 145-150 to look up the meaning of each word listed below.

2. Circle the words that are machines. You are classifying words into the category of machines.

1. blend-o-mat
2. card
3. doff
4. dust mask
5. hopper
6. micronaire
7. multimixer
8. ear plug
## Machine Functions

**Directions**

Draw a line from each machine to its function.

<table>
<thead>
<tr>
<th>Machines</th>
<th>Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.) card</td>
<td>a.) removes fibers from the bale</td>
</tr>
<tr>
<td>2.) hopper</td>
<td>b.) mixes fibers</td>
</tr>
<tr>
<td>3.) blend-o-mat</td>
<td>c.) separates, aligns, and delivers fibers in a</td>
</tr>
<tr>
<td></td>
<td>sliver form</td>
</tr>
<tr>
<td>4.) multimixer</td>
<td>d.) opens bale stock</td>
</tr>
</tbody>
</table>

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Comparing and Contrasting

Comparing means showing how things are alike. Contrasting means showing how things are different.

For example, you can compare the chute and the coiler head by saying both are parts on the carding machine. You can contrast them by saying they have different functions.

1. Compare the trumpets. List two ways they are alike.

2. Contrast the trumpets. List two ways they are different.
Comparing and Contrasting

**Comparing** - how things are alike.

**Contrasting** - how things are different

1. Compare a dust mask and an ear plug. List two ways they are alike.

   ________________________________________________________________
   ________________________________________________________________

2. Contrast a dust mask and an ear plug. List two ways they are different.

   ________________________________________________________________
   ________________________________________________________________

3. Compare a multimixer and a blend-o-mat. List two ways they are alike.

   ________________________________________________________________
   ________________________________________________________________

4. Contrast a multimixer and a blend-o-mat. List two ways they are different.

   ________________________________________________________________
   ________________________________________________________________
Suffixes

A suffix is a syllable added to the end of a word. Adding a suffix to a word changes its meaning.

For example, the word doff means to take off. When the suffix "er" is added, the word changes to doffer. A doffer is a part on the carding machine.

Directions
Circle the suffix on the following word:

carder

1. What does the word card mean? (you may use a dictionary)

2. What does the word carder mean? (you may use a dictionary)

3. Write another word that changes when you add the suffix "er".

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Prefixes and Suffixes

A prefix is a syllable added to the beginning of a word.

A suffix is a syllable added to the end of a word.

Adding a prefix or a suffix to a word changes its meaning.

Some words have both a prefix and a suffix. Circle the prefix on the word below. Draw a box around the suffix on the word below.

Multimixer

Practice locating suffixes and prefixes

Circle the prefixes on the words below.
Draw a box around the suffixes on the words below.

1. drawing
2. hopper
3. unparallel
Nouns and Verbs

Sometimes a word is used as a noun in one sentence and a verb in another sentence.

A noun is a person, place, thing, or idea.

A verb is the action word in a sentence.

A verb tells what something does.

Directions
Read the sentence below.
Write noun in the blank if the word choke is used as a noun.
Write verb in the blank if the word choke is used as a verb.

1. A choke in your carding machine could slow down production.

2. You may choke if your necktie gets caught in the machine.
Using Dictionary Entries

When you look in a dictionary you learn many things about a word. You learn the following things:

- how to pronounce the word correctly
- how the word functions in a sentence (if it is a noun or verb)
- the meanings of the word (some words have more than one meaning)

Example

**air (er, ar) n.**
1. the invisible mixture of gases that surrounds the earth; atmosphere
2. movement of air; breeze, wind
3. energy used to move stock fibers and control pneumatic valves.

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Using Dictionary Entries

These are the dictionary entries for dust house and blow down:

**dust house** (dust hous) *n.* part of the air cleaning system

**blow down** (blo doun) *v.i.* using compressed air to clean machines

1. Is the word dust house a noun or a verb? ____________________
   (Hint: use the dictionary entry) (write noun or verb)

2. Is the word blow down a noun or a verb? ____________________
   (Hint: use the dictionary entry) (write noun or verb)

3. Write a sentence using the word dust house.

   ____________________

4. Write a sentence using the word blow down.

   ____________________
Reading Flow Charts

A flow chart is a diagram that shows each step in a process or system. The flow chart below is simple. It shows the steps needed to turn cotton into yarn.

Cotton is Selected

Opening

Carding

Drawing

Combing

Winding → Yarn

Spinning

Roving
Flow Charts

Things to notice on flow charts:

- the beginning and ending steps are inside circles
- the middle steps are inside rectangles
- the direction the steps go in is shown by arrows
Directions
Make a simple flow chart of a work day. The steps listed below are not in the correct order. Write each step in the correct place on the flow chart.

work  drive to work  eat dinner
wake up  clock in  clock out
go to bed  eat breakfast  drive home

The first one has been done as an example.
Flow Charts

Some flow charts are more complex. They show places where decisions must be made. In the flow chart below we begin with yarn and end with inspection and packaging. After the cutting and sewing stage we must decide whether to send the products to embroidery or screen printing. In the flow chart below the question has a diamond shape around it. A diamond shape means that a decision must be made.

![Flow Chart Image]

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Flow Charts

Answer the questions based on the flow chart below.

1. Write the beginning step in the blank. __________________
2. Write the ending steps in the blanks. ____________ ____________
3. What decision needs to be made after the yarn step?

________________________

Spinning

Yarn

Should yarn be sent to knitting or weaving?

Knitting

Finishing

Cutting & Sewing

Inspection and Packaging

Russell Clothing

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Russell Fabric
Reading Flow Charts

All flow charts do not follow the guidelines listed on page 131, but the process of reading the charts is still the same. All charts have:

1. starting points  
2. processes in the middle  
3. ending points

The chart below was taken from a Russell booklet.

From Start...

[Diagram of flow chart showing various processes such as opening, carding, drawing, combing, ring spinning, yarn, knitting, weaving, dyeing, and finishing.]
Answers the questions based on the flow chart on page 135.

1. Write the number of steps it takes to turn raw cotton into a Cross Creek shirt?

2. Circle the cutting and sewing process on the flow chart. After cutting and sewing, they go to one of two places. Write the places they go in the blanks.

3. We have already learned about opening and we are learning about carding now. I have check mark on the flow chart next to these processes. If we follow the flow chart to the next area, do you think we will learn about next?
Homophones

Words that sound alike but have different meanings are called homophones.

Directions:
1. Read the definition in the box below.

A nep is a small knot of fibers that will not straighten to a parallel position.

When saying the word knot the k is silent.

2. The words knot and not are homophones.

3. What does the word knot mean?

4. What does the word not mean?
Neps are small tangled knots of fibers. They may be formed by: (a) ginning wet cotton, (b) badly worn saw blades, or (c) feeding too much seed cotton into the gin at one time. Neps are difficult to remove. Long and fine cotton fibers tend to have more neps than short and coarse fibers. If neps are not removed they will show up in the finished fabric as spots. Neps dye to a different shade from the rest of the fabric which makes the fabric look speckled.

1. Why is it important to remove neps?

2. How is the micronaire of the cotton fibers related to neps?
   (Hint remember micronaire means the fineness of cotton fibers)
Abbreviations and Symbols

An abbreviation is a shortened form of a word. Instead of writing out the whole word we can use its abbreviation. For example the abbreviation Jan. is a shortened form of the word January.

A symbol is a sign that stands for a word. For example the symbol & stands for the word and.

A. Weight refers to the number of grains per yard of sliver.

B. Wt. refers to the no. (or #) of gr./yd. of sliver.

Directions

☆ Read sentences A and B.
Sentence A is written using whole words.
Sentence B is written using abbreviations and symbols.

☆ Do the exercises below.

1. Write the abbreviation for the word weight. __________
2. Write the abbreviation and the symbol for the word number. __________ __________
3. Write the abbreviation for the word grains. __________
4. Write the symbol for the word per. __________
5. Write the abbreviation for the word yard. __________
Weight and Weigh

We learned that weight is the number of grains per yard of sliver (see page 139 for a reminder). Weight is a measurement.

Weigh means the act of measuring the heaviness of something. Weigh is an action word.

Write weigh or weight in the blanks.

1. The _______ of a grain is one seven thousandth of a pound.

2. We would use a scale to _______ a bale of cotton.

3. The word _______ is a noun and the word _______ is a verb. (A noun is a person, place, or thing. A verb is an action word.)
What do you think?

Answer the questions below using complete sentences.

1. What does the word weigh mean?

2. What does the word pan mean?

3. Using what you know about the words weigh and pan write a definition for the word weigh pan. (Hint: a weigh pan is used in the blending process.)

4. Look up the word weigh pan in the work specific dictionary. Compare your answer for #3 to the definition in the dictionary.
Scanning to get information fast

Scanning is looking for certain words to find facts or answers to questions. Scanning is a useful skill to have. It will help you find things quickly. If you have a question about the carding machine you would not want to read the whole carding machine manual. You would want to scan it to find the answer to your question.

There are 4 vocabulary words that have the word stock in their definition. Scan the work specific dictionary on pages 145-150 for the word stock. Write the vocabulary words that have the word stock in their definition in the blanks below.

1. 

2. 

3. 

4. 

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Breaking the Code

Carding vocabulary words are defined below. Write the vocabulary word in the blanks next to the definition. Each letter in the vocabulary word matches a symbol (below the blank). Find the symbol in the box at the bottom of the page and write the correct letter in the blank. The first one has been done as an example. The words can be found in the work specific dictionary (page 145).

1. The energy used to move stock fibers and control pneumatic valves.
   \[ \text{AIR} \]

2. Using compressed air to clean machines.
   \[ \text{Air} \]

3. The number of grains per yard of sliver.
   \[ \text{S} \]

4. A face covering that helps prevent a person from inhaling cotton dust.
   \[ \text{Face} \]

5. A machine for mixing fibers.
   \[ \text{Machine} \]

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Work Specific Dictionary
Russell Corporation
Carding Common Vocabulary
Carding Common Vocabulary Words

1. air  
2. bale  
3. blend  
4. blend-o-mat  
5. blow down  
6. card  
7. choke  
8. cotton  
9. creel  
10. doff  
11. drawing  
12. dust house  
13. dustmask  
14. ear plug  
15. hopper  
16. laydown  
17. micronaire  
18. multimixer  
19. neps  
20. staple length  
21. trumpet  
22. waste  
23. weigh pan  
24. weight

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page 146
1. **Air** is energy used to move stock fibers and control pneumatic valves.

2. A **bale** consists of compressed fibers. It is commonly used to package or store staple.

3. A **blend** is a yarn formed by combining two or more staple fibers.

4. A **blend-o-mat** is a machine that removes fibers from the bale.

5. **Blow down** means using compressed air to clean machines.

6. The **card** is a machine that separates, aligns and delivers fibers in a sliver form.

7. A **choke** is a “bottle-neck” of fibers. It interferes with the normal stock flow.
8. Cotton is a natural fiber.

9. Creel means to refill stock. A creel is also a frame for holding sliver.

10. Doff means to take off.

11. Drawing is a rope-like form of fibers.

12. A dust house is part of the air cleaning system.

13. A dustmask is a face covering. It is worn to help prevent inhaling cotton dust.

14. Ear plugs are used to protect from hearing loss.

15. A hopper is a machine that opens bale stock.
16. **Laydown** refers to bales of fiber arranged in a particular order.

17. **Micronaire** refers to the fineness of cotton fibers. It is the diameter of the cotton fibers. *(Diameter: straight line through the center of a circle -- thickness.)*

18. The **multimixer** is a machine for mixing fibers.

19. **Neps** are small knots of fibers that will not straighten to a parallel position.

20. **Staple length** is a measure of the length of the cotton fibers.

21. A **trumpet** is a cone shaped part on many machines. It condenses a web into sliver.
22. Waste is left over fibers from different processes.

23. A weigh pan is a pan used to weigh fibers in the blending process. It is located under the carding machine.

24. Weight is the number of grains per yard of sliver.
Answer Key
Vocabulary Section
Lesson 4 - Carding Technical Vocabulary

Page 110
unparallel should be circled

Page 113
1. unproductive
2. multipurpose
3. microscale

Page 115
1. books
2b. Russell products
2c. processes in the preparation of cotton.

Page 118
answers will vary

Page 119
1. Micronaire
2. Staple length

Page 120
Theré should be an X through the picture in the center. The sentences will vary. One reason for crossing out the center picture is that in the other two pictures people are working together, whereas in the center photo the man is alone. Another possibility is that the people in the other pictures are communicating face-to-face, whereas the communication in the center picture is via telephone.

Page 121
the following words should be circled:
1. blend-o-mat
2. card
5. hopper
7. multimixer

Page 122
1. c
2. d
3. a
4. b

Page 123
answers will vary
Answer Key
Vocabulary Section
Lesson 4 - Carding Technical Vocabulary

Page 124
answers will vary

Page 125
carder
1. answers will vary. A card is a machine used in the processing of cotton.
2. answers will vary. A carder is a person who runs the carding machine.
3. answers will vary

Page 126
Multi mixer
1. drawing
2. hopper
3. un parallel

Page 127
1. Noun
2. Verb

Page 129
1. noun
2. verb
3. answers will vary
4. answers will vary

Page 132
wake up
→ eat breakfast
→ drive to work
→ clock in
→ work
→ clock out
go to bed

Page 134
1. Spinning
2. Russell Fabric and Russell Clothing
3. Whether the yarn should be sent to knitting or weaving
Answer Key
Vocabulary Section
Lesson 4 - Carding Technical Vocabulary

Page 135

From Start...

Page 136

1. 14 the steps are listed below
   1 opening
   2 carding
   3 drawing
   4 combing
   5 roving
   6 ring spinning
   7 winding
   8 yarn
   9 knitting
   10 dyeing
   11 finishing
   12 cutting & sewing

Page 137

13 embroidery or screen printing
14 inspection & packaging

2. Embroidery
   Screen Printing

3. Drawing
   answers will vary

Page 137

A knot is a group of entangled fibers.
Not is a functional word used to make a statement negative.

Page 138

1. Sentences should indicate that it is important to remove neps because they will cause defects in the end products.
2. Sentences should indicate that fibers with a small micronaire will have more neps than fibers with a larger micronaire. The paragraph states that fine cotton tends to have more neps.
Answer Key
Vocabulary Section
Lesson 4 - Carding Technical Vocabulary

Page 139
1. Wt.
2. no.
3. gr.
4. /
5. yd.

Page 140
1. Weight
2. weigh
3. weight is a noun
   weigh is a verb

Page 141
1. answers will vary
2. answers will vary
3. A weigh pan is a pan used to
   weigh fibers in the blending
   process.

Page 142
the following words can be
written in any order:

air
choke
creel
hopper

Page 143
Answer Key
Vocabulary Section
Lesson 4 - Carding Technical Vocabulary

Page 144

Breaking the Code
Carding vocabulary words are defined below. Write the vocabulary word in the blank and give its definition. Each letter in the vocabulary word matches a numeral (below the blank). Find the numeral to the left of the name of the page and write the correct answer in the blank. The first one has been done as an example.

1. The energy used to move stock fibers and control pneumatic valves.
   AIB

2. Using compressed air to clean machines.
   FIB

3. The number of grams per yard of fiber.
   WT

4. A frame covering that helps prevent a person from inhaling cotton dust.
   DOY

5. A machine for mixing fibers.
   MAB

---

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RUSSELL CORPORATION - LESSON 4

READABILITY TEST FOR VOCABULARY WORDS AND DEFINITIONS
Gunning’s Fog Index, Flesch-Kincaid Score, Flesch Reading Ease Score, and Flesch Reading Ease Grade Level

1. **Gunning’s Fog Index** indicates how difficult the document is to read, based on the averages for sentence lengths and the number of multi-syllable words in sentences. The higher the index, the more difficult the document is to read.

2. **Flesch-Kincaid Score** indicates the Fog Index as a grade level. The higher the score, the more difficult the document is to read.

3. **Flesch Reading Ease Score** indicates how easy it is to read and understand the document, based on the average number of words per sentence and the average number of syllables per 100 words. The higher the score, the easier the document is to read and understand.

   The highest score is 100, which indicates the document is very easy to read and understand. An average score is between 60 and 70. A low score is between 0 and 30, which indicates the document is very difficult to read and understand.

4. **Flesch Reading Ease Grade Level** indicates the Flesch Reading Ease Score as a grade level. A fourth grade level corresponds to a score between 90 and 100. An eighth grade level corresponds to a score between 60 and 70. A college education corresponds to a score between 0 and 30.
Readability Statistics

Totals
- Words: 1286
- Sentences: 154
- Paragraphs: 0
- Syllables: 1955
- 3-syllable words

Averages
- Words per sentence: 8.35
- Sentences per paragraph: 0

Readability
- Gunning’s Fog Index: 7
- Flesch-Kincaid Score: 5.69
- Flesch Reading Ease Score: 75
- Flesch Reading Ease Grade Level: 5

Interpreting the Flesch Reading Ease Score
A Reading Ease Score of 75 means the reading difficulty is fairly easy for most readers. This score is associated with a 6th grade reading level.
<table>
<thead>
<tr>
<th>Component</th>
<th>Core Russell Levels E &amp; M</th>
<th>Levels E &amp; M</th>
<th>Levels A, B &amp; C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Comprehension</td>
<td>Reading for Messag Level I</td>
<td>Reader's Choice</td>
<td>Reading for Today</td>
</tr>
<tr>
<td></td>
<td>Reading for Informations- Level I</td>
<td>-Insights 1-3, 8-11, 28-29, 44-45 (E, M)</td>
<td>-Book 2 11, 23, 35, 47, 59, 71, 83 (E)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Connections 1-5 (E, M)</td>
<td>-Book 3 23, 35, 83 (E)</td>
</tr>
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<td></td>
<td>New Beginnings in Reading</td>
<td>-Book 4 12, 27, 41, 55, 68, 83 (E)</td>
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<td></td>
<td>-Book 4 1-3, 6, 15-17, 28-30, 41-43 (E)</td>
<td>-Book 5 12, 13, 22, 41, 55, 83 (E)</td>
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<td></td>
<td>-Book 5 1-3, 5-17, 29-31, 43-48, 48 (E)</td>
<td>Spotlight Series -All Books (E)</td>
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<td></td>
<td></td>
<td>-Book 7 28, 54, 56, 65 (E)</td>
<td>Great Series -All Books (E)</td>
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<td></td>
<td>-Book 8 14-16, 19-42-44 (E)</td>
<td>Comprehension Skills -Facts Prep 1-18 (E)</td>
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<tr>
<td></td>
<td></td>
<td>New Pre-GED Series -Critical Reading Skills 15-24 (M)</td>
<td>-Facts 1-18 (E)</td>
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<tr>
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<td></td>
<td>-Social Studies Skills 17-22 (M)</td>
<td>-Levels D, E, F 1-25 (E)</td>
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<td></td>
<td></td>
<td>Building Basic Skills -Reading Book 1 34-44 (M)</td>
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#### Levels A & M

- **A**: 1-21
- **B**: 22-40
- **C**: 41-50
- **D**: 51-60
- **E**: 61-80
- **F**: 81-100
- **G**: 101-121
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<td>Life Skills Writing - Unit 1 (C) (Educational Design, Inc.)</td>
<td>Workforce Literacy for JOBS 2000 - Book 2 Chapter 4 (C) (Educational Design, Inc.)</td>
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The following publishers were referenced in the preceding tables:

Contemporary Books, Inc.
180 North Michigan Avenue
Chicago, IL 60601
(800) 621-1918

Educational Design Inc.
47 West 13th Street
New York, NY 10011
(800) 221-9372

Globe Fearon Publishing Company
241 Frisch Court 3rd Floor
Paramus, NJ 07652
(800) 848-9500

MacMillan-McGraw Hill Company,
Glencoe McGraw Hill Division
15319 Chatsworth Street
Mission Hills, CA 91346
(818) 898-1391

Steck-Vaughn Company
8701 North Mopac Expressway
Austin, TX 78759
(512) 343-8227
Workplace Education
Practicum Sample

(developed during year 2)
Sample Lesson
on
Form Completion
Use the directions below and complete the form on page 9*.

1. Write today's date in the space following the word "Date."

2. Write your name in the space following the words "Material Handlers."

3. Write your supervisor's name in the space following the word "Supervisor."

4. Write your shift in the space following the word "Shift."

(Directions continue on the following page)

* There are extra copies of all forms on page ___. You may use them at any time.
Use the directions below and complete the form on page 9*.

5. Fill in the ticket numbers and the weights for each of the following:

- ticket number 014050 weighs 556.5 pounds
- ticket number 014051 weighs 550.0 pounds
- ticket number 014052 weighs 551.0 pounds
- ticket number 014053 weighs 550.0 pounds
- ticket number 014054 weighs 510.0 pounds
- ticket number 014055 weighs 550.0 pounds
- ticket number 014056 weighs 556.5 pounds

6. Check to make sure the information on the form is correct. It is important to double check or proofread your work.

* There are extra copies of all forms on page ___. You may use them at any time.
Directions
Proofread the Daily Pallet Inventory Form on the following page. It should include the information below. Circle any errors that you find.

- The date is February 12, 1994.
- The material handler is John Smith.
- The supervisor is Jane Doe.
- The shift is D-1.
- The ticket numbers and weights are:
  - ticket number 015046 weighs 546.5 pounds
  - ticket number 015047 weighs 554.0 pounds
  - ticket number 015048 weighs 561.0 pounds
  - ticket number 015049 weighs 549.0 pounds
Several of the words from the Daily Pallet Inventory form are hidden in the block below. Some of the words are hidden backwards. See if you can find:

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<th>Ticket Number</th>
<th>Shift</th>
<th>Proofread</th>
<th>Material Handlers</th>
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The Daily Pallet Inventory form uses weights.

The weights are written with whole numbers and decimals.

Since decimals are types of fractions, we need to understand fractions first.

Once fractions are understood we can begin studying decimals.
A fraction is a part of something. Fractions are whole numbers separated into equal parts. An inch is a fraction of a foot. It is one of the twelve parts of a foot or \( \frac{1}{12} \) (one twelfth) of a foot.

Answer the following questions

1. Five inches is what fraction of a foot?

2. Seven inches is what fraction of a foot?
JOB TASKS INSTRUCTIONAL MATERIALS
RUSSELL CORPORATION
LESSON 1 - FORM COMPLETION

Directions
Answer the following questions. Please write in complete sentences.

1. What are 2 things that you work with at Russell Corporation that should be measured in pounds?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. What are 2 things that you work with at Russell Corporation that should be measured in tons?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. What are 2 things that you work with at Russell Corporation that should be measured in ounces?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Insert a brief exercise on reading scales or other measurement devices used at Russell Corporation.

Russell clip art needed to complete section.
Adding and subtracting units of weight measurement

Units of measure can be added, subtracted, multiplied, and divided. We will focus on addition and subtraction in this section.

Units of measure can be added just like whole numbers.

Example 1

```
Step 1   Add the ounces
5 lb 6 oz
+ 2 lb 4 oz
10 oz

5 lb 6 oz
+ 2 lb 4 oz
7 lb 10 oz
```

Step 2   Add the pounds

Step 1   Add the ounces
5 lb 6 oz
+ 2 lb 4 oz
10 oz

5 lb 6 oz
+ 2 lb 4 oz
7 lb 10 oz
Return to Daily Pallet Inventory form.

* Ask participants to identify and explain all portions of the form.

* Emphasis will be placed on pallet weights (especially when weights are in decimal format).

Russell clip art needed to complete section.
Workplace Education
Practicum Sample

(developed during year 3)
RUSSELL CORPORATION
SUGGESTED INSTRUCTION GUIDELINE

Lesson 3

Introduction of Concepts

Open the discussion giving students an ample amount of time to tell something about where they work and their job duties. Build on the learners' background experience of workplace vocabulary. Have students brainstorm about words used in the carding process. Discuss familiar carding vocabulary with students. The instructor will need to introduce the glossary at this point. Allow students an opportunity to define each word before the definition is given.

Instruct the students to write a paragraph about the carding process. Review how to write a paragraph; for example, a good paragraph begins with a topic sentence that will tell what the paragraph will be about. A topic sentence is stated in one sentence. This sentence may be written at the beginning, middle, or end of the paragraph. All the other sentences provide details to support the topic sentence.

Direct Instruction

Briefly review the words included in the glossary located at the end of Lesson 3. Have each student define that word, tell how it is used in the carding process and state if the word is related to his/her job. If yes, how? This process continues until each vocabulary word has been covered.

Practice Exercises
Exercise #1 (Group)
Playing Cards
Divide the students into small groups. Give each student an index card with a vocabulary word and definition on it. Have each student pronounce that word and read the definition aloud. Ask each student to say the words as a group in unison. Next ask each student to pronounce the words! Help them if necessary.
Exercise #2 (Group)
Playing Cards
Choose a group leader for this exercise. The group leader will instruct the students to come to the front of the class. Pick up one of the playing cards from off the desk. The card will have only the carding vocabulary word on it. The group leader will instruct the student to (a) pronounce the word, (b) used it in a sentence as it relates to the carding process and (c) give the definition for that word. This process continues until each vocabulary word has been covered.

Practice Exercises
Exercise #3 (Individual and Group)
Have students to do exercises 1-5. This will increase students familiarity with the carding vocabulary words. Review prefixes, suffixes, roots and compound words with students before beginning these exercises. After students have completed each exercise allow the group leader to review these exercises with students. Allow students to discuss the words or definitions they are not familiar with or cannot pronounce. Ask students to research this word and its meaning and to tell why it is important to know this word.

Exercise #4 (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 play word scramble using the vocabulary, syllables, cards, picture clues and word puzzles (try and find).
CARDING VOCABULARY

Carding words are defined below and some have pictures.

WEIGH PAN - (fig. 17.8) Located under the carding frame. It is used to weigh the fibers in the blending process.

STAPLE - (fiber)(fig. 17.1) A term used in the plant to classify natural or cut length fibers from filament.

TRUMPET - A tube that the cotton fibers are pulled through to form a mass of fibers into a strand.

BLEND-O-MAT - (fig. 17.6) A machine that removes fibers from the bale.
MICRONAIRE - (fig. 7.2-3) is the fiber age; the size of cotton fibers.

NEPS - unmatched fibers. A small knot of knotted fibers that usually will not straighten to a straight position during carding or drafting.

CARDING - Fig 17.5-17.10) a procedure in the producing of spun yarns where the staple is opened, cleaned, aligned, and formed into a silver (the cleaning of fibers; it removes fibers too short for yarn).
Write a paragraph about the carding process. Refer to the glossary, group discussion notes and picture clues to help complete this exercise.

A paragraph is a set of related sentences that develop a central point or a main idea. A good paragraph begins with a topic sentence that will tell what the paragraph will be about. A topic sentence is stated in one sentence. This sentence may be written at the beginning, middle, or end of the paragraph. All the other sentences provide details to support the topic sentence. A paragraph is made up of two to four sentences.
1. A suffix is a word that is added to the end of a word. Circle the suffix of the following words.

- weigh pan
- blend-o-mat
- trumpet
- micronaire
- neps
- staple
- carding

2. The root word is the simplest form of related words. For example, learn is the root word of learner, learned and learning.

Write the root words of the words listed in number 1.

CARD  ______  ______  ______

_______  ______  ______
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 to form a compound word.

Circle the compound word in the word box.

Word Box

- staple
- micronaire
- trumpet
- weigh pan
- nep
- carding
- blend-o-mat

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

The __________ is located under the carding frame. It is used to weigh fibers in the blending process. (Hint: The missing word is a compound word.)
5. Arrange the following words and word phases in alphabetical order.

weigh pan  trumpet  nep  staple
micronaire  carding  blend-o-mat

1. blend-o-mat
2. 
3. 
4. 
5. 
6. 
7. 
Match the carding vocabulary with the picture clues below.

Micronaire          Staple            Trumpet

Blend-o-mat

Staple
**WORD SCRAMBLE**

Unscramble the following Carding vocabulary words. You may look back at the preceding pages.

<table>
<thead>
<tr>
<th>NEPS</th>
<th>WEIGH PAN</th>
<th>STAPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUMPET</td>
<td>BLEND-O-MAT</td>
<td>MICRONAIRE</td>
</tr>
</tbody>
</table>

Carding

1. EPNS  
2. TLNA-D-EBOM  
3. EMICIAERION  
4. TPESAL  
5. GCADRNI  
6. PTRMTUE  
7. NPS EWHGI
A syllable is a word part that is pronounced as a separate sound. There is usually only one vowel sound in each syllable. A vowel sound is made by a, e, i, o, u and sometimes w and y.

**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. carding (card/ing)</td>
<td>2</td>
</tr>
<tr>
<td>2. weigh pan</td>
<td></td>
</tr>
<tr>
<td>3. neps</td>
<td></td>
</tr>
<tr>
<td>4. staple</td>
<td></td>
</tr>
<tr>
<td>5. trumpet</td>
<td></td>
</tr>
<tr>
<td>6. blend-o-mat</td>
<td></td>
</tr>
<tr>
<td>7. micronaire</td>
<td></td>
</tr>
</tbody>
</table>
Complete the crossword puzzle below. Use the carding vocabulary words, definitions and picture clues for this exercise.

weigh pan
nep(s)
staple

trumpet
micronaire
bler.1-o-mat

carding

ACROSS
1. The fiber maturity
2. Length of fibers
3. A machine that removes fibers from the bale
4. A pan that weighs fibers in the blend process

DOWN
1. Unparallel fibers
2. A tube that the cotton fibers are pulled through
3. The cleaning of fibers
The carding process has been included as part of the glossary to familiarize you with how fibers become silver in the carding process.

The manufacturing process starts with the spinning of the yarns. The fibers go through a series of processes. One of these processes is carding. Carding continues the cleaning of the fibers; it removes fibers too short for use in yarns. The process partially arrange the fibers so that their longitudinal axes are slightly equal. Carding is achieved by wire cards or granular cards. Wire cards contain two layers of card clothing consisting of wire flats (rectangular shapes) in which fine wire pins are fasten. The flats are joined to a steel cylinder and to an endless belt that rotates over the top portion of the cylinder. (Fig 17.9) The two sets of pins move in the same direction, but at different speeds, to tease the fibers into a filmy layer, so that a thin web of fibers is formed on the cylinder. (Fig. 17.10). The thin web is gather into a soft mass and pull into a ropelike strand of fibers about 3/4 to 1 inch in diameter (1.9-2.5cm), called a silver. The silver is pulled through a coneshaped outlet and doffed or delivered to cans or to a conveyor belt. Granular cards are similar to wire cards except the the “card clothing” is made of a rough glandular surface slightly similar to rough paper.
GLOSSARY

WEIGH PAN - located under the carding frame. It is used to weigh the fibers in the blending process.

TRUMPET - A tube that the cotton fibers are pulled through to from a mass of fibers into a strand.

STAPLE - (fiber) (fig 17.1) a term used in the plant to classify natural or cut length fibers from filament.

BLEND-O-MAT - (fig. 17.6) is a machine that removes fibers from the bale.

MICRONAIRE - (fig. 7.2) is the age; the size of cotton fibers.

NEPS - unmatched fibers. A small knot of knotted fibers that usually will not straighten to a straight position during the carding or drafting.

CARDING - a procedure in the producing of spun yarns where the staple is opened, cleaned, aligned, and formed into a silver (the cleaning of fibers; it removes fibers too short for yarn.)
JOB TASKS INSTRUCTIONAL MATERIAL
RUSSELL CORPORATION
LESSON 3 - GENERAL VOCABULARY

SUPPLEMENTAL MATERIAL

BASIC SKILLS

Sentence Combining/Paragraph Development
Publisher: Steck Vaughn, Inc.
Topic Sentence Steck Vaughn Pre GED Writing
Identify pp 20

Sentence Sequence
Steck Vaughn Pre GED Writing
pp 22,52

Identify and Develop Paragraph
Topic Sentence

Publisher: Contemporary Books, Inc.
Publication(s): New Pre - GED Series - Writing/Language Skills
pp 176-179
Building Basic Skills in Writing
Book 2 - Writing
pp 109-114

Publisher: Steck Vaughn Company
Publication(s) Language Exercises - Level D
pp 69, 76
Language Exercises - Level E
pp 67, 69-71, 75, 76

Language Exercises - Level F
pp 93, 97, 102, 103

Sentences Sequences

Published: Contemporary Book, INC

Publication(s): New Pre-GED Series - Critical Reading Skills
Pages 71-78

Publisher: Steck Vaughn Company
Publication(s) Publications are listed below.

Structural Units
Vowel Sound

Reading for Today
Book 3
pp 42, 43, 79

Book 4
Reading for Today
pp 21, 91, 99
pp 21, 35, 48
pp 91, 98, 104

Book 5
pp 6, 20, 21, 76
pp 6, 7, 34, 35
pp 48, 49, 76
pp 77
Affixes
Reading Skills for Adults
pp 40, 50 (Blue Book)

Reading Skills for Adults
pp 40, 50 (Red Book)

Reading for Today
Book Two
pp 8, 20, 32, 44, 68, 80

Reading for Today
Book Three
pp 32, 68

Reading for Today
Book Four
pp 22, 50, 64, 99, 101, 102

Reading for Today
Book Five
pp 92, 98, 104

Compounds
Reading for Today
Book Three
pp 8

Reading and Following Directions
CASAS

Publisher: Prentice Hall Regent
Publication(s): Cambridge Adult Education
**Communication Competencies for Adults: The Dictionary and other References.**

**Publisher:** Janus Book Publishers  
**Publication(s):** Survival Guides:  
Reading and Following Directions, E2

### UTILIZE CONTEXT CLUES

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<tr>
<th>Publisher:</th>
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| **Publication(s):** | Readers Choice - Insights  
pp 4, 6, 12, 14, 20, 22, 28, 30, 36, 38, 44, 46, 52-54, 60, 62, 68, 70, 76, 78, 84, 86, 92, 94  
Reader Choice - Connections  
pp 4, 6, 12, 14, 16, 20, 22, 28, 30, 35, 38, 44, 46, 52, 54, 60, 62, 70, 76, 78, 84-86, 92, 94  
Building Basic Skills - Book 1 - Reading  
pp 123-134 |
| **Publisher:** | Steck - Vaughn Company  
Vocabulary Connections - Level E  
pp 7-9, 10, 14-16, 19, 21, 24, 25, 27, 31-34, 38, 40, 43, 45, 48, 49, 51, 55, 57, 58, 62-64, 67-69, 72, 75, 79, 80, 82, 87, 88, 91, 93, 96, 99, 103, 105, 106, 110, 112, 115-117, 120, 121, 123 |
ANSWER KEY

CROSSWORD PUZZLE

ACROSS
1. MICRONAIRE
2. STAPLE
3. BLEND-O-MAT
4. WEIGH PAN

DOWN
1. NEP(s)
2. TRUMPET
3. CARDING

WORD SCRAMBLE
1. NEP
2. BLEND-O-MAT
3. MICRONAIRE
4. STAPLE
5. CARDING
6. TRUMPET
7. WEIGH PAN

ALPHABETIZED
1. BLEND-O-MAT
2. CARDING
3. MICRONAIRE
4. NEPS
5. STAPLE
6. TRUMPET
7. WEIGH PAN

PICTURE CLUES
1. STAPLE
2. BLEND-O-MAT
3. TRUMPET
4. STAPLE

COMPOUND WORDS
4. WEIGHT PAN

SUFXIXES
1. CARDING
2. TRUMPET
3. MICRONAIRE

ROOT WORDS
1. CARD
2. MICRON, MICRO
3. TRUMP

SYLLABLES
1. 2
2. 2
3. 1
4. 2
5. 2
6. 3
WORKPLACE CURRICULUM
RUSSELL CORPORATION
CARDING TECHNICAL VOCABULARY
LESSON 4

VED 695F
PRACTICUM IN ADULT EDUCATION
AUBURN UNIVERSITY
SUMMER QUARTER, 1994
RUSSELL CORPORATION
LESSON 4
CARDING TECHNICAL VOCABULARY
RUSSELL CORPORATION
BASIC COMPETENCY SKILLS

1. Recognize job related vocabulary words.
2. Recognize common words and meanings.
3. Separate syllables.
4. Writing job related words.
5. Demonstrate word alphabetization.
6. Utilize context clues.
RUSSELL CORPORATION
SUGGESTED INSTRUCTION GUIDELINE
Practice exercises

Exercise #1 (Individual)
Instruct students to read the words in the word box. Ask students if there are words they cannot pronounce. Ask students to write the words they did not know.

Exercise #2 (Group)
Ask students the name of their plant manager and employee relations manager. Instruct students to print their name, plant manager’s name, and the employee relations manager’s name in the appropriate place. Ask students to say these names and listen to the number of syllables they hear.
(Individual)
Proceed with the job specific words.

Exercise #3 (Group)
Ask students to arrange themselves in alphabetical order by their last names; repeat using their first names. Discuss which is the more appropriate arrangement and why.
(Individual)
Instruct students to arrange the job specific words in alphabetical order.
(Group)
Discuss the three questions. Provide examples for each if appropriate.

Exercise #4 (Individual)
Instruct students to complete the exercise on where to find words based on the alphabet range.

Exercise #5 (Group)
Divide students into two teams. Ask each team to unscramble the job specific words.

Exercise #6 (Individual)
Ask students to read the passage. Ask students if they identified their plant location in the passage. (Group) Ask for other information learned about their plant.
1. Weigh pan
2. Trumpet
3. Neps
4. Micronaire
5. Staple
6. Blend-o-mat
A work specific dictionary is located at the end of this lesson. It may be used as a reference.
Directions:

Circle the words in the WORD BOX that you do not know how to pronounce. Ask your instructor to pronounce the circled words. You may use a dictionary.

Write the words you did not know.
A syllable is a word part that is pronounced as a separate sound. There is usually only one vowel sound in each syllable.

Write these names and the number of syllables you hear.

<table>
<thead>
<tr>
<th>Name</th>
<th># of syllables</th>
</tr>
</thead>
<tbody>
<tr>
<td>your name</td>
<td></td>
</tr>
<tr>
<td>your Plant Manager’s name</td>
<td></td>
</tr>
<tr>
<td>your Employee Relations Manager’s name</td>
<td></td>
</tr>
</tbody>
</table>

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>weigh pan</td>
<td></td>
</tr>
<tr>
<td>trumpet</td>
<td></td>
</tr>
<tr>
<td>neps</td>
<td></td>
</tr>
<tr>
<td>micronaire</td>
<td></td>
</tr>
<tr>
<td>staple</td>
<td></td>
</tr>
<tr>
<td>blend-o-mat</td>
<td></td>
</tr>
<tr>
<td>Russell</td>
<td></td>
</tr>
<tr>
<td>corporation</td>
<td></td>
</tr>
<tr>
<td>textile</td>
<td></td>
</tr>
</tbody>
</table>
Having words in alphabetical order is very helpful when you need to locate a word quickly.

Directions: Arrange the following words and word phrases in alphabetical order.

- weigh pan
- trumpet
- neps
- micronaire
- staple
- blend-o-mat
- Russell corporation
- textile

Where can you find words arranged in alphabetical order?

- 
- 

Why is alphabetical order of words helpful?

- 
- 

Give two examples of how alphabetical order is used at your plant location.

- 
-
### WORD BOX

<table>
<thead>
<tr>
<th>Trumpet</th>
<th>Neps</th>
<th>Staple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russell</td>
<td>Micronaire</td>
<td>Blend-o-mat</td>
</tr>
<tr>
<td>Weigh pan</td>
<td>Corporation</td>
<td>Textile</td>
</tr>
</tbody>
</table>

Write the words you would find between the letters A to L.

Write the words you would find between the letters M to Z.
Word Scramble

Directions: Unscramble the carding vocabulary words. Write the unscrambled word in the space to the right.

1. geihw npa
2. mtrpeut
3. pnse
4. emricarnoi
5. telpsa
6. dben-o-tma
7. lsueis
8. ncooriptrao
9. teelxit
SPINNING OPERATIONS

During the first six years of operation, Ben Russell bought yarn for his knitting mill from various plants around the country. In 1908, the first spinning operations were started at Russell with 24 spinning frames. In 1914, a second yarn mill, Number Two, was put into operation. In the next few years two other plants were built – Mill Number Three in 1918 and Mill Number Four in 1921. In 1973, the Coosa Open-End Spinning Plant opened. In late 1977, Habersham Mills, a yarn manufacturing plant in northeast Georgia was acquired. Other plants opened were another Coosa yarn plant in 1988, LaFayette Industrial Park plant in 1990, and the Wetumpka Yarn Plant in 1991. The Wetumpka Yarn Plant was renamed to the E.C. Gwaltney Spinning plant. A new Cotton Receiving plant was built in 1991 in Alexander City and began operation in 1992.

from
"A Brief History of Russell Corporation"
by
Thomas Byron Saunders

Copy a sentence from the paragraph above that tells about your plant location.

[Blank]

Write the answer to these questions about Russell Corporation. You may look back at the above paragraph.

1. When did Ben Russell first begin operation?

[Blank]

2. When was your plant built? When did it begin operation?

[Blank]
1. Weigh pan – a pan that weighs fibers in the blending process
2. Trumpet – a conical shaped part of a draw frame.
5. Staple – length of fibers.
6. Blend-o-mat – a machine that removes fibers from the bale.
OTHER WORDS YOU NEED TO KNOW:

Fibers – Something that can be spun into yarn.
Cotton is a natural fiber from a vegetable.

Conical – shaped like a cone. Example: ice cream cone

Unparallel – lines or in textiles, fibers, that do not lay side by side.

Example:  
parallel lines  

Example:  \ /
unparallel lines

Diameter – length of a straight line through the center

Bale – shipping and storage package for cotton.

Weigh – measure the heaviness of something using a scale.
<table>
<thead>
<tr>
<th>ALABAMA ADULT EDUCATION CURRICULUM: BASIC SKILLS COMPETENCIES</th>
<th>TABE CORRELATION CONTEMPORARY LEVELS E, M, D, A</th>
<th>TABE CORRELATION STECK-VAUGHN LEVELS E, M, D, A</th>
<th>CASAS CORRELATION LEVELS A, B</th>
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<tr>
<td>VOCABULARY (R.2.3.0)</td>
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<td>Vocabulary Connections Level C and D (E)</td>
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<tr>
<td>Avg. paragraph length</td>
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**Interpretation**

- Preferred level for most readers.
- This represents 6 to 10 years of school.
- The amount of passive voice is within a reasonable range for this writing style.
- May indicate choppiness or lack of sentence variation. Try varying sentence length.
- Most readers could understand the vocabulary used in this document, based on syllables per word.
- Avoid 1-sentence paragraphs in business or technical writing.

**Statistics for A:\writesam**

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Press any key to continue...
ANSWER KEY

Page 1
Not graded

Page 2
1. 2
2. 2
3. 1
4. 3
5. 2
6. 3
7. 2
8. 4
9. 2

Page 3
blend-o-mat
corporation
micronaire
neps
Russell
staple
textile
trumpet
weigh pan
JOB TASKS INSTRUCTIONAL MATERIALS
RUSSELL CORPORATION
LESSON 4 – CARDING TECHNICAL VOCABULARY

ANSWER KEY

Page 4
blend-o-mat
corporation

micronaire
neps
Russell
staple
textile
trumpet
weigh pan

Page 5
1. weigh pan
2. trumpet
3. neps
4. micronaire
5. staple
6. blend-o-mat
7. Russell
8. corporation
9. textile

Page 6
1. 1902
Lesson One:
Understanding Context

"Context" means setting, or environment. Context often affects meaning. Notice how the context affects the word "choke" in the following sentences:

- A choke in your carding machine could slow down production.

- Michael Jordan would never choke in the final seconds of a close game.

In the first sentence, "choke" means "a bottle-neck of fibers that interferes with normal stock flow". In the second sentence, the same word appears in a different setting -- and has a different meaning ("to fail or to perform badly under pressure").

Exercise 1.a

Everything -- not just words -- has a context. People have contexts, too. Write three sentences that each describe a different context in which you live, work, play, etc.

1. ____________________________

2. ____________________________

3. ____________________________
Exercise 1.b

Which context in your life is the most important to you? Why? Explain in a paragraph.

4. ____________________________
   ____________________________
   ____________________________
   ____________________________
   ____________________________
   ____________________________
   ____________________________
Lesson Two:
Using Context Clues to Understand the Meanings of Words

The "context" of a word is its surroundings. Often, you may figure out the meaning of an unfamiliar word by examining the words around it. For example, someone unfamiliar with the textile industry may not know the word "bale", as in "bale of cotton". This person may read the following sentence, though, and get a clue to what "bale" means:

- Machines are linked by computer so that the process is in complete harmony, from the moment a bale is opened until the time the product is shipped.

Clearly, a "bale" has to do with the beginning of textile processing. In the sentence, we can see the relationship between a "bale" and the finished product -- the bale is one of the things we use to manufacture a finished textile product.

Often, a difficult word's meaning is revealed by another, more familiar word:

- A blending duct is located below the spiked rollers from where the material is pneumatically withdrawn, being assisted in this by the return air that is directed to the front of the mixer.

In this sentence from a multimixer service manual, the phrase "assisted in this by the return air" may suggest to you that "pneumatically" means "done with air".
Exercise 2.a

Look carefully at the following sentences. Use the context to choose the best word from your vocabulary list to fill in the blank. After you choose a word, write one or more words from the context which serve as clues.

Vocabulary List:
cotton, pneumatic, choke, strength, residual, laydown, air, waste, creel

1. Can you hear the air rushing through the _______ valves?
   word clue(s): __________________________

2. Man-made fibers are sometimes much stronger than _______.
   word clue(s): __________________________

3. The supervisor was suprised at the number of bales in the _______.
   word clue(s): __________________________

4. We had some _______ fiber left over; the rest was collected in the air filtering system.
   word clue(s): __________________________

5. If you _______ the sliver carefully, it won’t tangle when I take it out.
   word clue(s): __________________________
Lesson Three: Locating Information Alphabetically

Guide words tell you the first and last entries on one page of a dictionary or a phone book. Since the entries are listed alphabetically, you can find the page where your word is located using the guide words. The word you need will fit alphabetically between the two guide words.
Exercise 3.a

Here are several pairs of guide words. Draw a line connecting each pair of guide words to the vocabulary word that would be included on that page of a dictionary or phone book.

<table>
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<th>Vocabulary Words</th>
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<td>creel</td>
</tr>
<tr>
<td>mangle -- mysterious</td>
<td>waste</td>
</tr>
<tr>
<td>chain -- collect</td>
<td>multimixer</td>
</tr>
<tr>
<td>cope -- cozy</td>
<td>choke</td>
</tr>
<tr>
<td>foil -- fill</td>
<td>air</td>
</tr>
<tr>
<td>kumquat -- lemon</td>
<td>cotton</td>
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<td>aim -- alienate</td>
<td>fiber</td>
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<tr>
<td>crank -- creep</td>
<td>lay-down</td>
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### Supplementary Materials:
#### Section Four, Carding Technical

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Comprehension (From Alphabetic Scope and Sequence)</th>
<th>TARC Correlations (Steck-Vaughn)</th>
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<tr>
<td>4.1.a</td>
<td>W.7.1</td>
<td>Level E ..................................</td>
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| 4.1.b    | W.7.2                                         | Level E ..................................
|          |                                               | Vocabulary Connections (Level C)    |
|          |                                               | Level M .................................. |
|          |                                               | Language Exercises (Levels D, F)    |
|          |                                               | Level D ..................................
|          |                                               | Language Experience (Levels G, H, Review) |
|          |                                               | Language in Daily Living (Phrases/Clauses, Punctuation/Capitalization) |
|          |                                               | English Essentials                  |
|          |                                               | Level A ..................................
|          |                                               | Steck-Vaughn GED Series (Writing, Complete GED Prep) |
|          |                                               | Writing Skills -- Conventions of English |
|          |                                               | Developmental Skills Series -- Writing |
| 4.2.a    | R.2.3.4                                       | Level E ..................................
|          | R.2.3.5                                       | Level E ..................................
|          |                                               | Reading For Today -- Books 1-5      |
|          |                                               | Vocabulary Connections -- Level C, D |
|          |                                               | Comprehension Skills Series 45'7    |
4.3.a  |  R.4.1  |  note: these skills -- using guide words and alphabetizing words -  
     |  R.4.4  |  - are not covered in TABE materials. See CASAS correlation  
     |        |  chart.            

<table>
<thead>
<tr>
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<th>TABE Correlations (Contemporary)</th>
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<td>Competencies</td>
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<td>Scope and Sequence</td>
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</table>
4.1.a  W.7.1  Level E  ------------------------------------------

Building Basic Skills in Writing
(Book 2)

The Write Stuff -- Lifeskills Writing

4.1.b  W.7.2  Level M  ------------------------------------------

New Pre-GED Series -- Writing/Language Skills

Building Basic Skills in Writing -- Book 2

Level D  ------------------------------------------

New Pre-GED Series -- Writing/Language Skills

Grammar Write Away -- Book 2

The Write Stuff -- Paragraphs

Level A  ------------------------------------------

Real Writing

New GED Comprehensive Text

New GED Satellite Program -- Writing Skills

GED Exercise Book -- Writing

Grammar Write Away -- Book 2

Writing Skills Workbook Series -- Book 3
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<td>note: these skills -- utilize context and recognize content-related vocabulary -- are applicable throughout all CASAS materials</td>
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Workplace Education Curriculum:
Lesson 4
Carding Technical Vocabulary

developed for
Dr. Jo Smith

VED 695F
Practicum in Adult Education
Auburn University
Summer Quarter, 1994
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<td><strong>Exercise (Worksheets)</strong></td>
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<tr>
<td>Alphabetizing Words - Exercise 1, 2</td>
<td>5</td>
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<td>7</td>
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<td>Capitalizing Sentences, Proper Names - Exercise 4, 5</td>
<td>9</td>
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<td>Answer Key</td>
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<td>Readability</td>
<td>13</td>
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<tr>
<td>Supplementary Materials</td>
<td>14</td>
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</table>
VOCABULARY WORDS

Lesson 4
VOCABULARY WORDS

card - a machine for carding (combing) fibers

drawing - a sliver, or rope like form of fibers

doff - to take off, or remove

blend - to achieve a homogeneous fiber ratio or to combine two fibers

weight - grain weight or number of grains per yard of sliver

bale - fibers compressed into a rectangular shape
INSTRUCTOR GUIDELINES

Lesson 4
SUGGESTED INSTRUCTION GUIDELINES

Introduction
Job specific vocabulary words are given to students auditorily in sentences, visually on chalk board of flip charts and kinesically in writing or underlining exercises. Definitions are read aloud and meaning discussed. Each students' perception of the vocabulary terms is solicited, in order to match definitions with information and experience he/she already possesses.

A. Direct Instruction/Guided Practice (small group)
Alphabetical order is the order that words would appear if they were lined up like letters of the alphabet.

Divide learners into teams of two. Distribute to each group a set of shuffled alphabet cards. Have students place in order. Next, hand out a set of cards with words that begin with each letter of the alphabet (art, better, chair, etc.) to each group. Let students place them in order. Discuss the fact that when two words begin with the same letter, the second letter of the word determines that words' order. Example: words beginning with "ca" would come before words beginning with "co". Finally, hand out cards with the words: card, choke, cotton, cent, cut, and cider. Allow time for students to arrange. Remind students if the first two letters are alike, then the third letter must be considered.

Briefly review definitions of vocabulary words: card, drawing, doff, blend, weight, bale.

Applied Practice
Have students complete exercise 1, 2.

Evaluation/Reteaching
Learners discuss answers and self correct, if necessary.

B. Introduction
Discuss brief history of the textile industry. Then allow students to contribute thoughts, since many will be from second or third generation textile families. Have students keep a list of words that sound unfamiliar to them. Then at the end of the discussion these are written on the board and clarified. After discussion is completed, ask individuals to decide the main topic of this discussion.

Obtain hand held cotton or linen cards and allow students to card raw fiber and form it into a sliver. Draw this sliver tight to feel how it thins and strengthens, then is moved off (doff) to later become thread. Be sure to include in this discussion how blends have improved the textile industry.
B. Direct Instruction/Guided Practice (continued)

Give students definition of context clues and main idea. Hand our cards to selected students. On each card will be a very short paragraph, and after it is read aloud, other students will identify the main idea. Each card will also contain a vocabulary word and context clue to describe or rename it, and students can identify these in a second round of discussion.

Example: After cotton is cleaned it is put into a bale, which is several hundred pounds of fiber compressed into a rectangular shape. Bales are shaped like giant rectangular boxes so that they can be stacked easily.

Main Idea - A bale is rectangular storage form for fibers.
Context Clue - bale - compressed fibers in rectangular shape

Applied Practice
Do exercise 3.

Evaluation/Reteaching
Discuss exercise answers. Self correct, if necessary.

C. Capitalization

Introduction /Direct Instruction
Review rules of capitalization with students. Ask each student to write a paragraph about his/her job requirements. Discuss the importance of capitalization in writing legible reports. Trade papers with other students. Allow them to express why or why they do not understand the report, and decide if sentences began with capitals contribute to this understanding.

Practice
Exercise 4, 5.

Evaluation/ Reteaching
Allow students to self correct and discuss.
EXERCISES (WORKSHEETS)

Lesson 4
Alphabetizing means that words are placed in order in the same way as letters of the alphabet. For example, words beginning with "a" come first, those beginning with "b" come second, and so on. Alphabetizing is a way to keep words organized so that you can locate them more easily.

**Exercise 1**

Arrange the following words in alphabetical order:

1. card
2. bobbin
3. drawing
4. grains
5. doff
6. sliver
7. blend
8. weight
9. skein
10. bale
Exercise 2

Look at the following list. Three words are not in alphabetical order. Write the list again to make it correct.

bale  1. ____________________________  
bobbin  2. ____________________________  
blend  3. ____________________________  
drawing  4. ____________________________  
card  5. ____________________________  
doff  6. ____________________________  
grains  7. ____________________________  
sliver  8. ____________________________  
skein  9. ____________________________  
weight  10. ____________________________
Exercise 3

Reading can be made easier. One of the ways you can read better is to learn to pick out context clues. Since you may not know the meaning of a word, context clues are words that tell you what other words mean. Context clues describe or rename other words.

Another way to make reading easier is to learn to look for the main idea of a paragraph of passage. The main idea just tells you what the passage is about.

Read the question section, but do not answer questions yet. Next, read the short story. After you have read the short story, answer the questions.

(Short story found on following page)
Long ago, leaves, seed and trash were picked out of cotton fibers by hand. After these were removed, the fiber were straightened and laid side by side with hand-held wooden paddles called cards. These paddles usually had a covering of leather with short fine wires run through it, and the fibers were straightened as they were pulled through the fine wires.

A modern card is a machine which separates, aligns and delivers the fiber in a sliver form, and also removes impurities. A card has three rolls, or cylinders. The surface of these are covered by many fine wires or metal teeth, which straighten the fibers.

People are now able to use machinery to produce more fibers in a shorter time. Because of this, more yarn and more cloth can be produced.

Questions

1. Write the words from paragraph two which tell you why a card is used.

2. Would a carding machine be used to knit cloth? Yes _____ No_____ Why? ________________________________________________________________

3. Which do you think would be the main idea of this passage?
   a. Rubber is a better card cover that leather
   b. People had hard times with cotton long ago.
   c. A card is a device which straightens fibers.
   d. Modern carding machines allow to process more yarn that older hand methods did.

4. What are the words in paragraph one which tell you what align means?

______________________________________________
Notes and reports that you write are easier to read if you use capital letters correctly. Capitals are used in several ways. One of these is to begin a sentence. Another way capital letters are used is to begin the name of a specific person, place or thing.

Choose a capital or small letter to place in these blanks.

1. C_ c_ arding is a process where fibers are straightened.
2. A_ a_ drawing sliver is a loose rope of fibers.
3. T_ t_ o doff means to take off, or remove
4. B_ b_ lending is the mixing of fibers.
5. W_ w_ hen fibers are compressed into a rectangular shape, they are baled.
6. W_ w_ eight means the number of grains per yard of sliver.
7. A place where fabric and clothing is made is R_ r_ ussell Corporation.
8. One of the brands of clothing made by Russell Corporation is J_ j_ erzees.
Exercise 5

In these sentences you will find mistakes. Change the letters to make them correct.

1. drawn slivers are doffed from the card machine when the canister is full.
2. fibers are brought into the plant in bales.
3. Machine operators at Russell Corporation must be trained and skilled.
4. two fibers are mixed together to make a blend.
5. the weight of a yard of sliver should be 53 grains when it comes from the card.
ANSWER KEY

Lesson 4
EXERCISE 1
1. bale
2. blend
3. bobbin
4. card
5. drawing
6. doff
7. grains
8. skein
9. sliver
10. weight

EXERCISE 2
Three words out of order
1. bobbin
2. card
3. skein

EXERCISE 3
1. separates fibers
   aligns fibers
   removes impurities
   delivers fibers in sliver form
2. No,
   A card is used to align fibers  (answers will vary)
3. D.
4. laid side by side
EXERCISE 4
1. Carding
2. A
3. T
4. B
5. W
6. W
7. R
8. J

EXERCISE 5
1. Drawn
2. Fibers
3. Russell Corporation
4. Two
5. The
READING LEVEL: 7.0

SOURCE OF EVALUATION: Fry Readability Graph

METHOD: Selected three 100-word passages for the worksheets; plotted on the graph the average number of sentences per passage (8) and the average number of syllables per passage.
SUPPLEMENTARY MATERIALS

Lesson 4
## JOB TASKS INSTRUCTIONAL MATERIALS
### RUSSEL CORPORATION
#### LESSON 4 - CARDING TECHNICAL VOCABULARY

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<th>TABE CORRELATION STECK-VAUGHN LEVELS E,M,D,A</th>
<th>CASAS CORRELATION LEVELS A, B</th>
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### LANGUAGE MECHANICS

**W4.0 Demonstrate use of Capitalization**
- Level II: Editor's Handbook
- Building Basic Skills in Writing Bks 1, 2 (E) Grammar Write Away Bk 1 (M)
- Language Exercises Levels A, B, C (E)

### LANGUAGE EXPRESSION

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### PRACTICAL ENGLISH

**USE REFERENCE MATERIALS (DICTIONARY)**

### MATHEMATICS COMPUTATION

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### MATHEMATICS CONCEPTS AND APPLICATION

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Workplace Education Curriculum:
Carding Technical Vocabulary
Lesson 4
# CARDING TECHNICAL VOCABULARY

## LESSON 4

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<tr>
<td>Using Guide Words</td>
<td>2</td>
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<tr>
<td>Using Dictionary Entries</td>
<td>4</td>
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<tr>
<td>Comparing and Contrasting</td>
<td>6</td>
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<td>Word Mapping (For Guided Writing)</td>
<td>8</td>
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<tr>
<td>Answer Key</td>
<td>10</td>
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<td>Instruction Guideline</td>
<td>12</td>
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<tr>
<td>Supplementary Materials</td>
<td>15</td>
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### vocabulary words

<table>
<thead>
<tr>
<th>air</th>
<th>hopper</th>
<th>dust house</th>
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<tbody>
<tr>
<td>blow down</td>
<td>ear plug</td>
<td>dust mask</td>
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EXERCISES (WORKSHEETS)

Lesson 4
READING LEVEL: 7.0

SOURCE OF EVALUATION: Fry Readability Graph

METHOD: Selected four 100-word passages from the worksheets; plotted on the graph the average number of sentences per passage (8) and the average number of syllables per passage (145.75).
Using Guide Words

Most dictionaries have two guide words at the top of each page. The guide words help you find the word you are looking for. The guide word at the top left is the first entry on the page. The guide word at the top right is the last entry on that page.

In each box are guide words that appear on pages in a dictionary. Below each group of boxes is a word you are looking for in a dictionary. Select the box which has the guide words that would appear on the page where you would find the word. Draw a line from the word to the correct box of guide words.

1. akin / Albany | ain / Ajax | ask / aspire
   - air

2. hotshot / householder | Hoover / horn | hood / hootowl
   - hopper

3. dump / dye | duty / dyke | drugstore / dud
   - dust house

4. birthright / black | blind / blue | bluff / body
   - blow down
5.

<table>
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<tr>
<th>east / echo</th>
<th>eagle / earth</th>
<th>empire / enclose</th>
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</thead>
</table>

earplug

6.

<table>
<thead>
<tr>
<th>duplex / dwell</th>
<th>dump / duplicate</th>
<th>dogfight / double</th>
</tr>
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</table>

dust mask

08/05/94
S. Yeager
Using Dictionary Entries

When you look in a dictionary, you learn many things about a word. First, you learn how to pronounce the word correctly. Then you find the meaning of the word and how it functions in a sentence (a noun, verb, etc.). If the word is a noun, you'll see an n. before the definition. If the word is a verb, you'll see a v.t. or v.i. before the definition. A word may function as more than one part of speech.

You may find that one word has many meanings. A number (1, 2, 3) in dark type comes before each meaning.

Each word below includes its dictionary entry. Study the meaning of each word. Write an original sentence for each word that shows you understand the meaning of the word as you use it in the carding department.

1. **air** (er, ar) n. 1 the invisible mixture of gases that surrounds the earth; atmosphere 2 movement of air; breeze, wind 3 energy used to move stock fibers and control pneumatic valves

2. **hopper** (hop’er) n. 1 a person or thing that hops 2 a box, tank, etc. often funnel-shaped, from which the contents can be emptied slowly and evenly 3 a machine that opens bale stock (fibers)
3. **dust house** (dust hous) *n.* part of the air cleaning system

4. **blow down** (blo doun) *vi.* using compressed air to clean machines

5. **earplug** (ir-plug) *n.* noise suppressant to protect from hearing loss

6. **dust mask** (dust mask) *n.* face covering used to prevent inhalation of cotton dust

08/05/94
S. Yeager
Comparing and Contrasting

Comparing means showing how two things are the same. Contrasting means showing how two things are different. For example, you can compare cotton and peanuts by saying both are harvested from plants. You can contrast them by saying peanuts can be eaten while cotton cannot.

1. (a) Name two ways a dust mask and an earplug are the same.

(b) Name two ways a dust mask and an earplug are different.

2. (a) Name two ways a dust house and a dust mask are the same.

(b) Name two ways a dust house and a dust mask are different.
3. (a) Name one way a blow down and air are the same.

________________________________________________________________________

________________________________________________________________________

(b) Name one way a blow down and air are different.

________________________________________________________________________

________________________________________________________________________

4. (a) Name one way a hopper and air are the same. (Clue: Think about how air is used in machines.)

________________________________________________________________________

________________________________________________________________________

(b) Name one way a hopper and air are different.

________________________________________________________________________
Word Mapping  
(For Guided Writing)

A word map is a chart to help you list and organize your thoughts about a word or topic of interest. Constructing a word map is a good way to expand the meaning of a word or to explore related ideas and issues for writing about a topic.

To begin, write the word or the topic in the center of a sheet of paper. Draw a circle around the word or phrase. As you think about the word or topic, other words or phrases will come to mind. Write all these words or phrases on the paper. They may be words or phrases that describe characteristics, describe use, words that mean the same, etc. For example, the word "truck" may bring to mind other words and phrases like "red", "4x4", "hauling", "hunting", "getting to work", "expensive", etc.

Next, draw a connecting line from each word or phrase to the circled word in the center of the page. This completes your chart (or word map) of words and phrases that are related to the original word or topic. (See the word map below.)

Now, you are ready to write a paragraph about the topic or word. The word map gives you ideas for a topic sentence and supporting information about the topic.
1. For a "warm-up" practice, think about the meaning of each word listed below. Beneath each word write words or phrases that come to your mind as you think of it. Write at least three words or phrases for each vocabulary word.

<table>
<thead>
<tr>
<th>dust house</th>
<th>blow down</th>
<th>earplug</th>
</tr>
</thead>
<tbody>
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<td>dust mask</td>
<td>air</td>
<td>hopper</td>
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</tbody>
</table>

2. Work with a partner. Choose one of the vocabulary words above. Construct a word map using that vocabulary word. Begin by writing the word in the center of a sheet of paper. Then brainstorm with your partner to think of words and phrases related to the vocabulary word. Be sure to use the three words you have already listed in exercise #1 above.

In the space below write a short paragraph using words and ideas from the word map.

____________________________________________________________________________________
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____________________________________________________________________________________
____________________________________________________________________________________

08/05/94  
S. Yeager
ANSWER KEY

Lesson 4
ANSWER KEY

WORKSHEET: *Using Guide Words*

1. aim / Ajax
2. hood / hootowl
3. dump / dye
4. blind / blue
5. eagle / earth
6. duplex / dwell

WORKSHEET: *Using Dictionary Entries*
(examples of sentences)

1. When lint accumulates, air is used to blow down the machines.
2. Instead of using a hopper to open and move bale stock, some mills laydown the bales stock where the fibers are picked up by a machine.
3. The dust house must operate 24 hours a day in order for the mill to meet the federal industrial clean air regulations.
4. Compressed air is used to blow down the machines to remove lint.
5. Ear plugs are not required in all areas of the mill, but they must be used where there is excessive noise.
6. Employees are required to wear dust masks in areas of the mill where there is a high level of lint in the air.
WORKSHEET:  Comparing and Contrasting
(possible responses)

1. (a) Both are used to meet safety regulations.
   Both are items to be worn by employees.
   (b) A dust mask is worn outside the body, covering the nose and mouth; an ear plug is worn on the inside of the ear, completely filling the outer ear canal.
   A dust mask filters the lint from the air entering the nose and mouth; an ear plug suppresses the noise entering the ear.

2. (a) Both are used to filter cotton lint from the air.
   Both are used to meet safety regulations.
   (b) A dust house is part of a machine; a dust mask is an item worn by employees.
   A dust house cleans and recirculates the air in the mill; a dust mask serves only to filter the air before it enters the body.

3. (a) Both are involved in cleaning lint off equipment in the mill.
   (b) A blow-down is primarily to clean lint off equipment; air has many uses in the mill--for example, compressed air works pneumatic valves and is used to move fibers and lint.

4. (a) Both are used to move cotton fibers.
   (b) A hopper is a machine; air is the energy used to control pneumatic valves in machines.

---

WORKSHEET:  Word Mapping (for Guided Writing)

(Variable answers)
SUGGESTED
INSTRUCTION GUIDELINE

Lesson 4
Introduction of Concepts

Vocabulary development is much more than just connecting words with their meanings or definitions. Words are actually labels for concepts; that is, words represent ideas that are connected to each other in a variety of ways. Each time learners hear or see a new word, they integrate that word into ideas or concepts that are part of their own prior knowledge and background of experience. If learners just memorize definitions and do not develop concepts with words, these words will soon be forgotten because they did not become part of the learners' thinking and life experience. Thus, vocabulary activities should always include useful, relevant words as well as work on concept development.

Introduction of Vocabulary Words

Choose job-specific vocabulary words that learners use in their work experience. Use the vocabulary words in sentences. Write the sentences on the board or flipchart; underline the vocabulary words.

<table>
<thead>
<tr>
<th>Vocabulary Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>air</td>
</tr>
<tr>
<td>blow down</td>
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<tr>
<td>hopper</td>
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<tr>
<td>dust house</td>
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<tr>
<td>ear plug</td>
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<tr>
<td>dust mask</td>
</tr>
</tbody>
</table>

Possible sentences:
1. When lint accumulates, air is used to blow down the machines.
2. The dust house must operate 24 hours a day in order for the mill to meet the federal industrial clean air standards; however, dust masks are also necessary for individual employees.
3. Ear plugs are not required in all areas of the mill, but they must be used where there is excessive noise.
4. Instead of using a hopper to open and move bale stock, some mills laydown the bale stock where the fibers are picked up by a machine.

Ask the learners to define each word based on the context of the sentence. Remind them to use, also, their prior knowledge and experience in defining the word. Encourage discussion to arrive at a consensus for a definition.
Instruct the learners to begin a word bank of vocabulary cards by writing each vocabulary word on an index card (3x5). Encourage learners to expand their concept of the word by later adding more information to the cards (such as definitions, pronunciation, syllabication helps, root words, prefixes, suffixes, antonyms, etc.). Suggest that learners add other words to their vocabulary work bank. The cards can be as detailed or as simple as the learner desires. The cards can be filed in a small box or secured with a rubber band.

**Direct Instruction**

Review the utilization of alphabetical order in using a dictionary. Refer to *Writing for Success* (pre-GED, Steck-Vaughn, p. 116.) Direct the learners to the Work Specific Dictionary located at the end of Lesson 4. Instruct learners to apply their knowledge of alphabetical order to find the vocabulary words air, hopper, dust house, blow down, ear plug, and dust mask; put a check mark by the words. Ask a learner to orally read the definition of each word. Guide the group to compare this definition with the definition the group agreed on in the introduction to this lesson.

**Practice Exercises**

**Exercise #1 (Individual, Small groups)**

Refer to worksheet, "Using Guide Words", pp. 2-3. Review the use of guide words to find words in a telephone book or dictionary. Instruct learners to select the guide words that would appear on the page where the vocabulary word would be found.

State that entries in the Work Specific Dictionary may differ slightly from the entries in a general dictionary; the Work Specific Dictionary will define the word as it relates to the workplace. Other dictionaries may include several meanings of words.

Refer to worksheet, "Using Dictionary Entries", pp. 4-5. Review the types of information that may be found in a dictionary entry (pronunciation, word meaning, grammar). Instruct learners to write original sentences using the vocabulary words on the worksheet.

When learners complete the assignment, instruct them to rewrite the sentences (out of numerical order) on a piece of paper. Instruct them to erase the vocabulary words in the sentences and exchange papers with another learner. Each will read the sentences they received in the exchange and write in the vocabulary words as appropriate. Then they will return the papers and work together to clarify the sentences as needed.

Instruct learners to add definition and any additional information to their vocabulary cards. (See "Introduction of Vocabulary Words".)
Exercise #2 (Groups)

Comparing and contrasting words is an activity that expands the basic definition of a word and enhances the concept of vocabulary development. Introduce this activity by asking learners to tell about a job they had before they worked in their present job. Guide learners to tell how the two jobs are alike (compare) and how they are different (contrast).

Refer to worksheet, "Comparing and Contrasting", pp. 6-7. Divide learners into groups of 3 or 4. Instruct learners to select a group leader and to work with their group to complete the worksheet. After the assignment is completed, assemble all the groups and ask each group leader to report on the results of comparing and contrasting the vocabulary words. Encourage the class to question and clarify any results.

Exercise #3 (Small Groups, Individuals)

Word mapping (sometimes called semantic mapping, webbing or clustering) is another way to expand learners' vocabulary. It provides a visual representation of the relationship between a vocabulary word and other words and concepts. Maps can be used in a variety of ways-before, during, and after reading activities, and to give students a structure in preparing to write about a topic. Word maps can be as detailed or as simple as the learner wishes.

Refer to worksheet, "Word Mapping", pp. 8-9. Demonstrate on the board the example of the word map for "truck". Guide learners to add their words or phrases to the "map"; write these words on the board. Instruct learners to groups classify or group the words; for example, which words describe the truck? Which words describe how the truck is used? Explain how this helps learners distinguish main ideas and details to be used to write a paragraph about the topic.

Instruct learners to complete the "warm-up" practice at #1 and to work with a partner to complete the brainstorming part of the exercise at #2. Then each learner will write a short paragraph and read it to his/her partner.

Exercise #4 (Group)

Password is an excellent game for vocabulary development and it is a useful culminating activity. It can be played with two teams of two or more players each.

Give one player on each team a card with a "secret word" on it that is not seen by the other partner. (Select vocabulary words from this lesson and previous lessons.) Players with the secret words take turns calling out to their partners one-word clues to help them guess the word. Teams should alternate in starting, and players should alternate in giving clues. The winning team can be the one that guesses the most secret words or accumulate the most points. (five points for getting a word on the first clue, four points on the second, etc.)
### RUSSELL CORPORATION

**LESSON 4 - CARDING TECHNICAL VOCABULARY**

**SUPPLEMENTARY MATERIALS**

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<th>COMPETENCY</th>
<th>TABE CORRELATION LEVELS E, M, D, A</th>
<th>TABE CORRELATION LEVELS E, M, D, A</th>
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**Use synonyms, antonyms, homonyms (R.2.3.2)**

**READER'S CHOICE**
- Insights (E, M)
- Connections (E, M)
- Discoveries (M, D)

**NEW PRE-GED SERIES**
- Critical Reading Skills (M, D)

**BUILDING BASIC SKILLS**
- Reading Book 1 (M)
- Reading & Critical Thinking (A)
- Vocabulary Builder (A)

**VOCABULARY CONNECTIONS**
- Level C (E)
- Level D (E)
- Level E (M)
- Level F (M)

**READING FOR TODAY**
- Book 4 (E)

**READING FOR TOMORROW**
- Book 2 (M)
- Book 3 (M)

**READING SKILLS FOR ADULTS**
- Blue Book (E)
- Red Book (E)
- Brown Book (M, D)
- Green Book (M)

**LANGUAGE EXERCISES FOR ADULTS**
- Level A (E)
- Level B (E)
- Level C (E)
- Level D (M)
- Level E (M)
- Level F (M)

**DEVELOPING READING STRATEGIES**
- Summits (M)
- Challenges (M)

**PRE-GED**
- Writing (M, D)
- Literature & the Arts (M, D)

**GED SERIES**
- Writing Skills (A)
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**LANGUAGE EXPRESSION**

(DEMONSTRATE COMPOSITION SKILLS – W.7.0)

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**BEST COPY AVAILABLE**
### Write a paragraph (W.7.2)

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### Topic sentence — identify and develop (W.7.3)

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### Practical English (Apply Study Skills – R.4.0)

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<table>
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<th>Locate information — dictionary (R.4.4)</th>
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<tbody>
<tr>
<td>READING FOR TOMORROW Book 1 (M) Book 3 (M)</td>
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</tbody>
</table>

## PUBLISHERS

* Contemporary Books, Inc.
  180 North Michigan Ave.
  Chicago, IL 60601
  1-800-621-1918

** Steck-Vaughn Company
  P.O. Box 26015
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  1-800-531-5015
The instructional audio tape and its accompanying text sheets and exercise sheets, cover the following SCANS competencies:

- Reading
- Writing
- Listening
- Speaking
- Self Management

The tape script, text sheets, and exercise sheets are about seventh grade reading level based on the Fry Readability Index. In the absence of available tape recorders, the tape script may be read to students for the instructional process.

Students can also be encouraged to make their own audio tape of the vocabulary words and their meanings. Their tapes can be used in place of side two of the instructional audio tape.
### JOB TASKS INSTRUCTIONAL MATERIALS

**RUSSELL CORPORATION**  
**LESSON 5 - COMBING VOCABULARY**

<table>
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<th>TABE CORRELATION</th>
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Side 1 Tape Script: Job Task Instructional Materials, Russell Corporation, Lesson 5 - Combing Vocabulary.
Locate the sheet with the Roman Number I in the center. Listen as I say all of the words two times each.
Combing--Combing/Lap--Lap/Feed Roll-- Feed Roll
Nipper Bar--Nipper Bar/Half Lap--Half Lap
Comber Noils--Comber Noils/Detaching Rolls--Detaching Rolls
This time I will say the words one at a time. Say each word after I say it.
Combing--(pause) Lap--(pause) Feed Roll--(pause)
Nipper Bar--(pause) Half Lap--(pause) Comber Noils--(pause)
Detaching Rolls--(pause)

Now, locate the sheet with the Roman Number II in the Center.
This time I will say the words and their meanings. Read along with me.
Combing- the process of removing the short fibers.
Lap- roll of drawing prepared by lap winder and fed into comber where short fibers are combed from lap.
Feed Roll - rolls that feed the lap to the nipper which holds the fibers while they are being combed.
Nipper Bar - metal blade that holds fibers while they are being combed
Comber Noils - short fibers that are combed out.
Detaching Rolls - set of rolls rotating back and forth that take the longer fibers left after combing, and carries them to the calendar section.
I'll say these again (tape repeats the above words and meanings).

Great! Let's move on. Locate the sheet with the Roman Number III in the center. Listen as I tell you the order of these words in the combing process.
FIRST the LAP is brought to the COMBING machine. SECOND the FEED ROLL feeds the lap to the NIPPER BAR which holds it for combing. THIRD the HALF LAP combs the COMBER NOILS from the fibers. FOURTH the DETACHING ROLLS take the longer fibers left after combing, and carries them to the calendar section.
Let me say that once more (repeat above word order)
Great, now turn this tape over and listen to the other side.

Side 2 Tape Script:
This side of the tape is for listening only. It has no sheets that go with it. You can listen to it anywhere, for instance in the car. Let's begin, first I'll say the words twice.
(tape repeats above section where words are said twice)
Now I'll say the words and their meanings.
(tape repeats section where words and meanings are said)
Finally, I'll tell you the order of these words in the combing process. (tape repeats section where combing word order is said)
This is the end of this tape. If you are in class tell your instructor you have listened to both sides of the tape.
If you are away from class, return this tape to your instructor as soon as you are finished with it. Happy Combing.
Combing
Lap
Feed Roll
Nipper Bar
Half Lap
Comber Noils
Detaching Rolls
Combing- the process of removing the short fibers

Lap- a roll of drawing prepared by lap winder and fed into comber where short fibers are combed from lap.

Feed Roll- rolls that feed the lap to the nipper which holds the fibers while they are being combed.

Nipper Bar- metal blade that holds fibers while they are being combed.

Half Lap- large roll which has teeth and combs the short fibers from the lap.

Comber Noils- short fibers that are combed out.

Detaching Rolls- set of rolls rotating back and forth that take the longer fibers left after combing and carries them to the calendar section.
FIRST the LAP is brought to the COMBING machine. SECOND the FEED ROLL feeds the lap to the NIPPER BAR which holds it for combing. THIRD the HALF LAP combs the COMBER NOILS from the fibers. FOURTH the DETACHING ROLLS take the longer fibers left after combing the calendar section.
The following words are hidden in the letters below. The words are written either horizontally or vertically. See if you can find them.

<table>
<thead>
<tr>
<th>LAP</th>
<th>SKEIN</th>
<th>PNEUMAFIL</th>
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<tr>
<td>FEED ROLL</td>
<td>STRENGTH</td>
<td>HUMIDITY</td>
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<tr>
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<td>DOUBLING</td>
<td>LAYDOWN</td>
</tr>
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<td>HALF LAP</td>
<td>COMBING</td>
<td>NIPPER BAR</td>
</tr>
<tr>
<td>FIBERS</td>
<td>DETACHING ROLLS</td>
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E T O P R C O M B E R N O I L S O
F R G O M L T V C O R T X U K D R
L D O U B L I N G A N P R T M E S
P T K U R V S G P F I F L A P T P
N M E G C D K L R T P G F O E A W
E X W F B T E O R M P Q I W F C K
U W T H R I I D C O E I B G U H P
M O H J Q M N G O N R H E K T I H
A H A L F L A P M L B B R W X N E
F J A U I N H 3 B S A R S M W G T
I C R O T A Q L I D R O S V Q R E
L L A Y D O W N N U G E D F G O W
J P U T D D G R G R Y P N A M L G
F E D L U Q H U M I D I T Y I L S
G M O T N P I U A T X D L C K S R
I H F E E D R O L L G W A O B M C
J P C R I M T D S T R E N G T H I
WORD SCRAMBLE
Unscramble the following general vocabulary words. You may look back at the preceding pages.

1. EDFE OLRL
2. PREPIN ABR
3. AFHL ALP
4. BCMROE LIONS
5. MOIGBNC
6. LPA
7. THIDGENCA LOLR
Draw a line from the words in the first column to the correct definition in the second column. One has been done for you.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lap</td>
<td>metal blade that holds fibers while they are being combed</td>
</tr>
<tr>
<td>Feed Roll</td>
<td>large roll which has teeth and combs the short fibers from the lap.</td>
</tr>
<tr>
<td>Detaching Rolls</td>
<td>roll of drawing prepared by lap winder and fed into comber where short fibers are combed from lap.</td>
</tr>
<tr>
<td>Nipper Bar</td>
<td>short fibers that are combed out.</td>
</tr>
<tr>
<td>Half Lap</td>
<td>set of rolls rotating back and forth that takes the longer fibers left after combing and carries them to the calender section.</td>
</tr>
<tr>
<td>Comber Noils</td>
<td>rolls that feed the lap to the nipper which holds the fibers while they are being combed.</td>
</tr>
<tr>
<td>Combing</td>
<td>a process which removes short fibers</td>
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### Basic Competency Skills

**Based on Alabama Adult Education Curriculum**

**Basic Skills - Scope and Sequences**

#### Reading

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<tr>
<td>R.2.3.0</td>
<td>Develop vocabulary</td>
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<tr>
<td>R.2.3.4</td>
<td>Utilize context clues</td>
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<td>R.3.8</td>
<td>Develop sequences</td>
</tr>
<tr>
<td>R.3.9</td>
<td>Compare/contrast information</td>
</tr>
<tr>
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<td>Utilize context clues</td>
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<td>R.4.2</td>
<td>Follow directions</td>
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# RUSSELL CORPORATION
## INDIVIDUALIZED EDUCATION PLAN

### NAME

### SOCIAL SECURITY NUMBER

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<tr>
<th>SECTION</th>
<th>Vocabulary</th>
<th>LEVEL</th>
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<th>DATE COMPLETED</th>
<th># CORRECT/TOTAL</th>
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<td>LESSON 8 Spinning Cotton Vocabulary</td>
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<td>LESSON 9 Minding Vocabulary</td>
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Russell Corporation
Lesson 6 - Drawing
Suggested Instruction Guideline
Ice-Breaker/Warm-up Exercise (Group)

Give everyone a copy of the brain teasers page. Explain that each item is a common phrase or thing. Do #1 as a class (the answer is sandbox). Ask participants to try to figure out the rest of the brain teasers.

Answers
1. Sandbox
2. Man Overboard
3. I Understand
4. Reading between the lines
5. Long Underwear
6. Cross Roads
7. Down Town
8. Tri-cycle
9. Bi-level
10. 3 degrees below zero
11. Knee on lights
12. Circles under the eyes
13. High Chair
14. Paradise
15. Touchdown
16. 6 feet under ground
17. Mind over matter
18. He's beside himself
19. Backwards Glance
20. Life after death

Exercise 1 (Group)

Explain how to determine root words. Using a flip chart differentiate the root word from the suffix or prefix by using different colors (for example write the word Draw in blue letters and the suffix 'ing' in red letters.

Write the word teach on the board/flip chart. Ask the participants how this root word can be changed. (The word teach can be changed to reteach, teacher, teaching, etc.)
Exercise 1 (continued)

Ask each class member to write four work-related root words on a piece of notebook paper. Class members should switch papers with one another and pencil in either a suffix or prefix. Make a list of the root words and how they were changed on the board. Point out root words that were changed in different ways (i.e. the word card may have been changed to cards or carding).

Exercise 2 (Group)

Explain the concept of understanding through context. Write the following statements on the board:

1. **Drawing** is an important part of processing cotton.
2. The child made a **drawing** of his parents.
3. He has been **drawing** water from that well since he was a boy.

Ask the participants what the word drawing means in each statement. Ask the participants how they knew the meaning. Circle the words in each statement that give the best clues to the meaning.

Ask the participants to get into small groups (3-4 people per group). Each group member should write one word that has multiple
meanings on a piece of paper. Each member should take turns sharing their word with their group. As a group, each team should try to come up with as many meanings for each member's word as possible. Each member should record on his/her paper the different meanings that the group lists. Next to each meaning the group should list a couple of words that would help give a clue to the meaning. Put the following example on the board.

**Drawing**

<table>
<thead>
<tr>
<th><strong>Meaning</strong></th>
<th><strong>Context Clues</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A step in processing cotton</td>
<td>cotton; process</td>
</tr>
<tr>
<td>2. Getting water from a well</td>
<td>water; well</td>
</tr>
<tr>
<td>3. A picture</td>
<td>picture; pen</td>
</tr>
</tbody>
</table>

**Exercise 3 (Individual)**

Ask each participant to find an article in a Russell Corporation publication (manual, newsletter, etc.) that uses a word that has different meanings. Ask each class member to underline the word in their article that has different meanings. Each participant should try to determine the meaning from the context. Ask each participant to
Exercise 3 (continued)

bring his/her article to class. Members of the class should trade articles and try to determine the meaning of the underlined word from the context.

Exercise 4 (individual)

Discuss the difference between comparing and contrasting. Ask each participant to list two things they use at work on a piece of paper. Each class member should then write two ways in which the items are similar and two ways in which the items differ.

Exercise 5 (group)

Ask the class to divide themselves into five groups. Each group will be responsible for presenting one step of the drawing process to the class. Groups should be encouraged to make visual aids, handouts, overheads, etc. to help them with their presentation.

The first group should explain how the sliver is fed into the draw frame. (They may need to explain where the sliver comes from)
Exercise 5 (continued)

The second group should explain how the sliver passes through the drafting system. They will need to explain how the pressure is applied downward on the rolls to control the fibers.

The third group should explain how the web is formed from the drafting system.

The fourth group should explain the function of the trumpet.

The fifth group should explain the delivery. They should also briefly discuss where the delivery goes after it leaves the drawing process.
BRAIN TEASERS

1. SAND
2. MAN BOARD
3. STAND

4. READING
5. WEAR ROAD
6. LONG

7. TOWN
8. CYCLE CYCLE
9. LEVEL
10. MD BA PH D

11. KNEE LIGHT
12. TOUCH
13. CHAIR

14. DICE
15. TOUCH DOWN
16. GROUND
17. MIND MATTER

18. HIS HIMSELF
19. ECNALG
20. DEATH LIFE

77 524
Russell Corporation
Lesson 6 - Drawing
Drawing Vocabulary
Participant Information

A work specific dictionary is located at the end of each lesson.

It may be used as a reference.
**Drafting System** - a part of the draw frame that is a series of rolls over rolls.

**Clearer** - a part of the drafting system located on the bottom of the front rolls. It keeps the rolls free from lint and dust.

**Web** - thin sheets of fiber formed from the drafting system.

**Trumpet** - a cone shaped part of the draw frame which forms sliver

**Delivery** - the sliver that comes out of the draw frame
A root word is the simplest form of related words. For example, *act* is the root word of *active, actor, react,* and *acting.*

Write the root word of each word listed below.

1. drafting ________________
2. drawing ________________
3. twisting ________________
4. delivery ________________
5. clearer ________________
6. doubling ________________
Many words have more than one meaning.

For example, the word rock might mean:

a.) to move back and forth
b.) music with a heavy beat
c.) a stone

Directions  Write more than one meaning for the words listed below. (Hint: you may use the work specific dictionary)

1. Web

2. Delivery
Directions: Write four meanings for the word draft. (Hint: use the work specific dictionary and the pictures)

1. __________________________
   ____________________________
   ____________________________

2. __________________________
   ____________________________
   ____________________________

3. __________________________
   ____________________________
   ____________________________

4. __________________________
   ____________________________
   ____________________________
Comparing and Contrasting

*Comparing* - how things are alike
*Contrasting* - how things are different

Compare the trumpets. List two ways they are alike.

________________________________________

________________________________________

Contrast the trumpets. List two ways they are different.

________________________________________

________________________________________
Words have meaning as they relate to other words in a sentence. The spoken or written passage in which a word occurs is called the *context*.

Look at the words or sentences surrounding a new word. They may help you figure out the new word's meaning.
Read the sentence in the box. It was taken from the newspaper article. You do not need to read the whole article.

The Colts, with two No. 1 picks and eight **draft** choices, top the NFL with a rookie pool.

1. What does the word draft mean in the box above?

2. Circle the words in the box that helped you figure out the meaning.
Steps in the drawing process

1. Sliver is fed into the draw frame.

2. Sliver passes through the drafting system. Here pressure is applied downward on the top rolls to help control the fibers.

3. A web is formed from the drafting system.

4. The web is formed into sliver at the trumpet.

5. Delivery (sliver from the draw frame)
Steps in the drawing process

Directions:
➢ Read the preceding page.
➢ The first step has been done as an example.
➢ Write a 2 in the box next to the second step in the drawing process. Continue placing the steps in order.

☐ Sliver passes through the drafting system.

☐ Delivery comes out of the draw frame as sliver.

1 Sliver is fed into the draw frame.

☐ A web is formed into sliver at the trumpet.
Complete the crossword puzzle below. The word **space** is a separation between words.

**ACROSS**
1. A part of the draw frame that is a series of rolls over rolls.
2. Thin sheets of fiber that are formed into sliver at the trumpet.

**DOWN**
1. A cone shaped part of the draw frame.
2. The sliver that comes out of the draw frame.
3. A device that keeps rolls free from lint or dust.
A root word is the simplest form of related words. For example, act is the root word of active, actor, react, and acting.

Write the root word of each word listed below.

1. drafting __________  
2. drawing __________  
3. twisting __________  
4. delivery __________  
5. clearer __________  
6. doubling __________

Directions Write four meanings for the word draft. (Hint: use the work specific dictionary and the pictures)

*Answers may vary*

1. __________  
2. __________  
3. __________  
4. __________

Many words have more than one meaning. For example, the word rock might mean:

a) to move back and forth  
   b) music with a heavy beat  
   c) a stone

Directions Write more than one meaning for the words listed below. (Hint: you may use the work specific dictionary)

1. Web
   Answers will vary

2. Delivery
   Answers will vary

Directions Write more than one meaning for the word listed below. (Hint: you may use the work specific dictionary)

1. Web
   Answers will vary

2. Delivery
   Answers will vary

Using Context Clues

Read the sentence in the box. It was taken from the newspaper article. You do not need to read the whole article.

*With rookies pool, every dollar counts*

The Colts, with two No.1 picks and eight draft choices, top the NFL with a rookie pool.

1. What does the word draft mean in the box above?  
   *Answers may vary*

2. Circle the words in the box that helped you figure out the meaning.
Comparing and Contrasting

Comparing - how things are alike
Contrasting - how things are different

Answers may vary

Compare the trumpets. List two ways they are alike.

- They both have wide/narrow openings.
- They are both made of metal.

Contrast the trumpets. List two ways they are different.

- One is used in manufacturing, while the other is used to make music.
- One makes noise, the other does not.

Steps in the drawing process

Directions:
- Read the preceding page.
- The first step has been done as an example.
- Write a 2 in the box next to the second step in the drawing process. Continue placing the steps in order.

2. Sliver passes through the drafting system.
4. Delivery comes out of the draw frame as sliver.
1. Sliver is fed into the draw frame.
3. A web is formed into sliver at the trumpet.

Complete the crossword puzzle below. The word space is a separation between words.

ACROSS
1. A part of the draw frame that ... series of rolls over rolls
2. Thin sheets of fiber that are formed into sliver at the trumpet

DOWN
1. A cone shaped part of the draw frame
2. The sliver that comes out of the draw frame
3. A device that keeps rolls free from lint or dust
Russell Corporation

Lesson 6 - Drawing

Readability Test for Vocabulary
Words and Definitions
Readability

Gunning's Fog Index, Flesch-Kincaid,
Flesch Reading Ease, and Flesch Grade Level

Gunning's Fog Index
indicates how difficult the document is to read, based on the
averages for sentence lengths and the number of multi-syllable
words in sentences. The higher the index, the harder the
document is to read.

Flesch-Kincaid
indicates the Fog Index as a grade level. The higher the score,
the more difficult the document is to read.

Flesch Reading Ease Score
indicates how easy it is to read and understand the document,
based on the average number of words per sentence and the
average number of syllables per 100 words. The higher the
score, the easier the document is to read and understand.
The highest score is 100, which indicates the document is very easy to read and understand. An average score is between 60 and 70. A low score is between 0 and 30, which indicates the document is very difficult to read and understand.

**Flesch Reading Ease Grade Level**

indicates the Flesch Reading Ease Score as a grade level. A fourth grade level corresponds to a score between 90 and 100. An eighth grade level corresponds to a score between 60 and 70. A college education corresponds to a score between 0 and 30.
# Readability Statistics

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**Readability:**

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Russell Corporation
Lesson 6 - Drawing
Supplementary Materials
# Job Tasks Instructional Materials

## Lesson 6 - Drawing Vocabulary Section

### Supplementary Materials

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# JOB TASKS INSTRUCTIONAL MATERIALS

## LESSON 6 - DRAWING VOCABULARY SECTION

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**Comparisons**

- **Building Basic Skills in Writing**
  - Book 2 (E,M)

- **The Write Stuff**
  - Shaping Sentences (E)
  - Putting it in Paragraphs (M,D)
  - Test and Essay Writing (M,D,A)

- **The New GED**
  - Comprehensive text (A)
  - Writing Skills Test (A)
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### Homonyms
- Reader's Choice
  - Insights (E,M)
  - Connections (E,M)
  - Discoveries (M,D)

- Language Exercises for Adults
  - Level A (E)
  - Level B (E)
  - Level C (E)
  - Level D (M)
  - Level E (M)
  - Level F (M)

- Steck-Vaughn Pre-GED
  - Writing (M,D,A)

- Steck-Vaughn Pre-GED
  - 2000 Software Programs
    - Writing: Mechanics Tool Box (D)

### Affixes
- Reader's Choice
  - Insights (E,M)
  - Connections (E,M)

- Vocabulary Builder (A)

- Language Exercises for Adults
  - Level C (E)
  - Level D (M)
  - Level E (M)
  - Level F (M)

- Reading Skills for Adults
  - Blue Book (E)
  - Red Book (E)

- Reading for Tomorrow
  - Book 1 (M)
  - Book 2 (M)
  - Book 3 (M)

- Steck-Vaughn GED Series
  - Writing Skills (A)