ABSTRACT

The goal of the project was to validate, refine, and develop plans for implementation of a performance-based challenge test in the cognitive and psychomotor aspects of basic clothing construction skills that could be utilized for grades 7-14. An advisory board and a jury panel representing the three instructional levels provided assistance in developing and validating the instrument. A clothing construction performance instrument was developed for each of two learning levels according to a matrix model. Following testing with 418 students in eight schools, the data obtained was subjected to statistical analysis. It was concluded that the test was feasible. The results are presented in narrative and tabular form. Recommendations are presented for both curriculum changes and test improvement. Appendices (121 pages) include project correspondence, forms, the matrix model, grading criteria for psychomotor skills, and the 65-page instrument developed. The basic areas covered by the test are fashion and fitting, fiber and fabric, sewing equipment, clothing construction, and clothing care. The format is multiple choice for the written part. Performance tasks are to be completed in the areas of clothing construction and sewing equipment. (Author/RG)
The activity which is the subject of this report was supported in whole or in part by the U.S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.
MINI-GRANT PROJECT RESUME

PROJECT TITLE: Clothing Construction Performance Assessment

AGENCY: Arizona State University
Tempe, Arizona, 85281

PROJECT DIRECTOR: Betty A. Hunter, Director
Assistant Professor of Textiles and Clothing
Elizabeth Monts, Assistant Director
Professor of Home Economics

DURATION: February 1, 1976 - June 30, 1976

COSTS:

RCU $5,111.00 LOCAL $800.00 TOTAL $5,911.00

PURPOSE OF PROJECT:
To validate, refine and develop plans for implementation of a clothing construction performance assessment for basic clothing construction utilizing competency-based standards and task inventories that would be appropriate for use as a challenge test from junior high school through grade 14.

DESCRIPTION OF PROJECT:

a. The review of literature covered the last ten years.

b. Five advisory board meetings, plus one jury panel session were held.

c. A clothing construction performance instrument was developed for levels one and two according to the model matrix. Also an experience data form was constructed.

d. The instrument was tested with 418 subjects in 8 schools.
e. Data were analyzed to determine mean, standard deviation, standard error, discrimination, difficulty and reliability.

The final report and information regarding the clothing performance assessment instrument will be disseminated at the August, 1976, conference in Flagstaff for home economics educators.

V. Body of Report in detail

A. Problem area toward which the project was directed, including references to previous studies, experiments and related literature.

In education, the opportunity for students to challenge a course is a valuable asset that has been used infrequently. This is particularly true for those content areas such as food preparation and clothing construction in home economics in which a student may have adequately achieved the required knowledges and skills through previous experiences either in or out of the school environment. All of the research within the last ten years dealing with clothing construction skills has been at the college level. Epps (1972) demonstrated that a written pre-test in clothing construction could be predictive of success in a clothing construction course. Using both pre- and post-test design, Souligny and Sisler (1972) were unable to draw a conclusion as to the value of their testing in relation to performance. During the 1960s there were several studies, Candice (1968); Walli (1968); and Marshall (1967), focused on using pencil and paper devices in pretest situations. Results were inconclusive and lacked appropriate follow-up.

Creekmore (1966) has probably done the most extensive collection of clothing construction assessment instruments. She made no attempt, however, to identify any achievement levels of clothing construction skills but, focused on general skills and techniques.

The fabrics and accompanying processes of construction have changed within the last five years. Consequently, the validity of any instrument done prior to that time would have to be questioned. Also, practically all of the research has dealt with the cognitive aspects of construction and the psychomotor domain has been ignored or assumed to be evaluated by pencil and paper devices.
A challenge test whereby students could demonstrate competency of the various levels of clothing construction has not been validated and published and is a much needed tool for both students and teachers. The establishment of such a device could simplify the articulation of students' progress from grades 7-14. As an outgrowth of the development of this challenge test, assuming acceptable validity and reliability, plans would be made to adapt the test for bilingual and non-reading students.

B. Goals and Objectives of the Project

GOAL

The goal of this project was to validate, refine, and plan for implementation of a performance based challenge test in the cognitive and psychomotor aspects of basic clothing construction skills that could be utilized for grades 7-14.

OBJECTIVE

The objective for the study was that by June 30, 1976, a student challenge test in basic clothing construction would be validated, refined, and a plan for implementation developed for grades 7-14 as evidenced by the final product.

C. Description of the General Project Design

The review of literature revealed that all the research that had been done within the past ten years was at the college level. There had been no attempt to identify any beginning, intermediate and advanced levels of clothing construction skills. Plans were made to develop a Clothing Construction Performance Assessment test (CCPA) for three levels. It was assumed that these three levels would be demonstrated by grades 7 through 14.

Junior, senior high and community college teachers made up the eight-member advisory board which met five times; January 27; February 13, 20, and 27; and March 6, 1976. (See Appendix A for names and letters.) This board finalized the total item pool for the instrument and began initial content validation. A jury panel of six members (see Appendix B), representing the junior, senior high and community college educational levels served to complete content.
validation of the instrument. One hundred percent agreement was achieved. A student background experience data form was developed to identify students' levels of psychomotor development.

Utilizing the state clothing curriculum guide, five content areas were delineated as: fashion and fitting; fiber and fabric; sewing equipment; clothing construction; and clothing care. First and second levels of learnings were used for fashion and fitting, sewing equipment and clothing construction. The curriculum guide had an additional third learning level for sewing equipment and clothing construction. Only the first level was used for clothing care and only the second level for fiber and fabric in both the guide and in the development of the instrument. Cognitive and psychomotor domains were used for assessing levels of achievement in the content areas of sewing equipment and clothing construction. Fashion and fitting, fiber and fabric and clothing care used only the cognitive domain. (See Appendix C.)

The project director administered the initial field tests to approximately 100 students from grades 13-14 for all the content areas at the first and second levels of learning to clarify any misconceptions and/or errors in the instrument.

Grades 8-14 were used for data collection. Ten teachers participated; three from junior high, six from senior high and one from grades 13-14. (See Appendix D.) Having approximately equal distribution, around 417 subjects were involved in testing the instrument. It was not possible to have a random sample because of time limitations for data collection, as well as teachers being unable to participate at the close of the semester. There was no reason, however, to believe that the sample was not representative of the different grade levels. Subjects met the criteria as first and/or second levels of clothing construction ability; thereby providing data for analysis. See Table I for number of respondents per content area.

Approval for data collecting was granted through Arizona State University's Interdisciplinary Committee on Human Experimentation (see Appendix E) and the administrative unit of each school. One school needed approval by the school board, the superintendent, the curriculum advisor, the principal and the teacher. For other schools, approval was
TABLE 1
Distribution of Subjects by Content Area and Level

<table>
<thead>
<tr>
<th>School</th>
<th>2-I N</th>
<th>2-II N</th>
<th>3-II N</th>
<th>4-I N</th>
<th>4-II N</th>
<th>5-I N</th>
<th>5-II N</th>
<th>6-I N</th>
<th>Background Experiences N</th>
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<tr>
<td>2a</td>
<td>33</td>
<td>33</td>
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<td></td>
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<td></td>
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<td>1b</td>
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<td></td>
<td>17</td>
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<tr>
<td>3-4c</td>
<td>56</td>
<td>71</td>
<td>70</td>
<td>71</td>
<td>72</td>
<td>72</td>
<td>68</td>
<td>112</td>
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<td>TOTALS N</td>
<td>108</td>
<td>126</td>
<td>103</td>
<td>174</td>
<td>107</td>
<td>189</td>
<td>104</td>
<td>149</td>
<td>334</td>
</tr>
</tbody>
</table>

a Junior High.
b Senior High.
c Grades 13-14.
The project director administered the test in one school and in the remaining nine classrooms, teachers gave the test. Teachers reported that the time required for taking any section of the paper and pencil items was no more than one classroom period. Some students completed a content area in 15 minutes; others took 45 minutes to complete. In most cases, two parts could be completed in one session. Time needed for the psychomotor portions of the tests was greater for the second levels than the first levels. The first levels of the psychomotor tests were completed during one class session while the second levels needed almost two (one hour) class sessions.

The teacher rated each student; above average, average, below average as to her perception of her/ his ability for the specific content area. (See Appendix G.) The students were identified by code number rather than by name.

The psychomotor sections of the tests were evaluated by the project director. See Appendix H for grading criteria.

The following materials were delivered to and picked up from each field site:

...Parent Consent Forms
...The instrument:
    ....answer sheets for paper and pencil parts
    ....pencils
    ....all fabrics and notions--cut and marked for each psychomotor test
    ....student coding sheets
(See Appendix I, notes to the teacher.)

D. How the Project was Evaluated

The project has gone through a continuous process of evaluation from its beginning by the use of the advisory board, the jury panel, the field test teachers, and data analysis to determine item analysis and reliability.
E. Results of the Project

See addendum 1 for detailed results.

F. Conclusions

See addendum 2 for detailed conclusions.
DISSEMINATION PLAN

An abstract of the final report and information regarding the clothing performance assessment instrument (see Appendix J) will be made available at the August, 1976, conference in Flagstaff for home economics educators. Information will be disseminated through the "Arizona Home Economics Association Newsletter" which is sent to all members during October. In addition the project abstract will be sent to all home economic supervisors within the state and to the Research Coordinating Unit.
## Project Title: Clothing Construction Completion Performance Assessment

### School: Arizona State University

### Date: 6-30-76

#### I. DIRECT COSTS

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<th>Funds Available</th>
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<td>C. Supplies and Materials</td>
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<td>D. Travel</td>
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<td>E. Communications</td>
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<td>F. Services</td>
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<td>G. Final Report Costs</td>
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<td>H. Other Direct Costs (list)</td>
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#### III. TOTAL COSTS

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<td>4256.43</td>
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Signed________________________ Project Director

Date__________________________
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<th>Page</th>
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</thead>
<tbody>
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<td>Project Resume</td>
<td>11</td>
</tr>
<tr>
<td>Addendum 1 - Results</td>
<td>1</td>
</tr>
<tr>
<td>Addendum 2 - Conclusions and Recommendations</td>
<td>25</td>
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<td>Bibliography</td>
<td>27</td>
</tr>
<tr>
<td>Appendices</td>
<td></td>
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<tr>
<td>A. Advisory Board for Clothing Construction Performance Assessment</td>
<td>28</td>
</tr>
<tr>
<td>Letter (1) to Advisory Committee</td>
<td>29</td>
</tr>
<tr>
<td>Letter (2) to Advisory Committee</td>
<td>30</td>
</tr>
<tr>
<td>B. Jury Panel for CCPA</td>
<td>31</td>
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<tr>
<td>C. Matrix Model</td>
<td>32</td>
</tr>
<tr>
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<td>33</td>
</tr>
<tr>
<td>D. Field Test Sites</td>
<td>47</td>
</tr>
<tr>
<td>E. Memorandum: Arizona State University Office of Research Grants and Contracts</td>
<td>48</td>
</tr>
<tr>
<td>F. Letter to Field Test Teacher</td>
<td>49</td>
</tr>
<tr>
<td>Response Sheet for Field Test Planning</td>
<td>50</td>
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<tr>
<td>Letter to Administration</td>
<td>51</td>
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<td>Letter to Parent</td>
<td>52</td>
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<tr>
<td>Parent Consent Form</td>
<td>53</td>
</tr>
<tr>
<td>G. CCPA Rating Sheet</td>
<td>54</td>
</tr>
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<td>H. CCPA Grading Criteria for Psychomotor</td>
<td>55</td>
</tr>
<tr>
<td>I. Notes to Teacher</td>
<td>62</td>
</tr>
<tr>
<td>Letter to Participating Teachers for testing the instrument</td>
<td>63</td>
</tr>
<tr>
<td>Thank You Letter to Teacher Participants</td>
<td>64</td>
</tr>
<tr>
<td>J. INSTRUMENT</td>
<td>65</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
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<tbody>
<tr>
<td>1</td>
<td>Distribution of subjects by content area and level</td>
<td>vi</td>
</tr>
<tr>
<td>2</td>
<td>Number of responses to total number of clothing courses taken in school</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Number of responses to number of clothing construction courses taken outside of school</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Frequency of responses to other sources of clothing instruction</td>
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</tr>
<tr>
<td>5</td>
<td>Number of responses to amount of sewing done</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Frequency of responses to types of fabrics used for clothing construction</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Number of responses to kinds of garments made</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>Number of responses to clothing construction processes</td>
<td>9</td>
</tr>
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<td>9</td>
<td>Frequency of responses to use of seams</td>
<td>8</td>
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<td>10</td>
<td>Item level of difficulty for Fashion and Fitting, levels one and two</td>
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<td>11</td>
<td>Item level of difficulty for Fiber and Fabric, level two</td>
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<td>12</td>
<td>Item level of difficulty for Sewing Equipment, levels one and two</td>
<td>18</td>
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<tr>
<td>13</td>
<td>Item level of difficulty for Clothing Construction, levels one and two</td>
<td>20</td>
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<td>14</td>
<td>Item level of difficulty for Clothing Care, level one</td>
<td>21</td>
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<tr>
<td>15</td>
<td>Teacher ratings of students for CCPA content areas</td>
<td>22</td>
</tr>
</tbody>
</table>
The procedures were followed as planned, with one exception. The field test was begun with 50 subjects. Data were collected and submitted for analysis, but unfortunately, the analysis could not be completed as planned and the analysis had limited use. As a result, most of the test refinement could not be done prior to the main study. In review of the importance of establishing the challenge test by the end of the school year, the decision was made to continue with the main study without a thorough item analysis. Validity had previously been established by the jury panel and was considered the most crucial component of the instrument.

The sample included both male and female students in grades seven through 14. Approximately 50 male subjects were involved, but no effort was made to segregate them from the total group.

The results are presented in three sections. The first section provides the summary data on student backgrounds. Secondly are the results regarding the instrument including item difficulty and reliability. The last part is directed toward teacher ratings.

Student Background

The summary data for the subjects are presented for each item of the Student Background Experiences. Since the CCPA was given in the latter two weeks of the semester, all subjects indicated having at least one course in clothing. The distribution of all subjects by total number of clothing construction courses taken in school are given in Table 2. Subjects that were in the senior high level had the highest mean number of school clothing courses completed. Over twenty-five percent of senior high level students had completed three or more courses and was higher than the other two groups (see Table 2).

Over 65 percent of all the students had not utilized non-school instruction courses for learning clothing construction processes. All of the subjects resided in areas where these courses were available through Stretch and Sew, 4-H, Scouts and other agencies. Of the three educational levels, the highest level, 13-14 grade, had also taken the greatest number of construction courses outside of school (see Table 3). Other resources for clothing construction assistance outside of a formal class setting were family, friends, neighbors or self. The youngest educational level
TABLE 2

Number of responses to total number of clothing courses taken in school.

<table>
<thead>
<tr>
<th>No. of courses taken</th>
<th>Jr</th>
<th>Sr</th>
<th>13-14</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
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<td>0</td>
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<td>00.0</td>
<td>0</td>
<td>00.0</td>
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<tr>
<td>1</td>
<td>9</td>
<td>15.5</td>
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<td>43.3</td>
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<td>2</td>
<td>49</td>
<td>84.5</td>
<td>61</td>
<td>26.2</td>
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<td>4</td>
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<td>6.9</td>
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<td>NR²</td>
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</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
<td>235</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1Adjusted percentages, used in all following tables.

2No response.
had the highest proportion of cases receiving clothing instruction from these resources. Approximately ten percent of the cases in each group indicated receiving a great deal of help from these less formal resources. In general, the older the age group, the more help that had been received. It is interesting to note that about twenty-four percent of junior high school students indicated having clothing instruction sponsored by out-of-school agencies (see Table 4).

**TABLE 3**

Number of responses to number of clothing construction courses taken outside of school.

<table>
<thead>
<tr>
<th>No. of courses taken</th>
<th>Jr N</th>
<th>Jr %</th>
<th>Sr N</th>
<th>Sr %</th>
<th>13-14 N</th>
<th>13-14 %</th>
<th>Total N</th>
<th>Total %</th>
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<tr>
<td>0</td>
<td>44</td>
<td>75.9</td>
<td>191</td>
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<td>1-2</td>
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<td>17.7</td>
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<td>7-10</td>
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<td>1</td>
<td>0.4</td>
<td>2</td>
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<td>11 or more</td>
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<td>0.0</td>
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<td>0.0</td>
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<td>0.0</td>
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<td>100.0</td>
<td>235</td>
<td>100.0</td>
<td>122</td>
<td>100.0</td>
<td>417</td>
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</table>

A sizeable proportion of the subjects, varying from 57 to 82 percent, made some or most of their own clothes (see Table 5). Even though junior high level students would be expected to be beginners, only 35 percent indicated making none of their clothes. Also, this group had received the least instruction. All subjects were enrolled in clothing construction courses but twenty-six percent checked making none of their clothes.

As could be expected, the most frequently used types of fabrics are the most common on the market, namely woven and knit (see Table 6). Once again, the senior high level had a more
even distribution of fabric experiences than the other two levels. The 13-14 grade levels had the most experience with furs. There was a notable number of students from all grade levels that had worked with the "others" which would include felts and non-textile materials.

**TABLE 4**

Frequency of responses to other sources of clothing instruction

<table>
<thead>
<tr>
<th>Help received</th>
<th>Educational levels</th>
<th>Total (N=214)</th>
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<td>Sr (N 117)</td>
</tr>
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<td>N</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>41</td>
</tr>
<tr>
<td>Yes</td>
<td>26</td>
<td>86</td>
</tr>
<tr>
<td>If yes, little</td>
<td>10</td>
<td>51</td>
</tr>
<tr>
<td>If yes, some</td>
<td>12</td>
<td>32</td>
</tr>
<tr>
<td>If yes, great deal</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>235</td>
</tr>
</tbody>
</table>

Items six through nine dealt with kinds of garments made. The results for these four items are presented as a unit and related data are given in Table 7.

The older the age level, the more blouses/tops were made. The junior high school respondents were finishing their first clothing course, but yet nearly 42 percent had made more than two tops. Blouses/tops seemed to be more popular than any other kinds of garments.

The number of dresses/robes constructed were directly proportional to educational age level. In regard to other kinds of garments than those mentioned, the advanced educational level, grades 13-14, had the largest number of respondents making more than six garments. But, again, the junior high level was fairly productive having 23 percent of these respondents making three or more garments.
TABLE 5

Number of responses to amount of sewing done.

<table>
<thead>
<tr>
<th>Item</th>
<th>Jr (N=58)</th>
<th>Sr (N=231)</th>
<th>13-14 (N=112)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N   %</td>
<td>N   %</td>
<td>N   %</td>
<td>N   %</td>
</tr>
<tr>
<td>Make none</td>
<td>21 36.2</td>
<td>63  27.3</td>
<td>22  19.6</td>
<td>106  26.4</td>
</tr>
<tr>
<td>Make some</td>
<td>34 58.6</td>
<td>139 60.2</td>
<td>59  52.7</td>
<td>232  57.9</td>
</tr>
<tr>
<td>Make most</td>
<td>0   0.0</td>
<td>27  11.7</td>
<td>30  26.8</td>
<td>57   14.2</td>
</tr>
<tr>
<td>Sew for others</td>
<td>3   5.2</td>
<td>2   0.9</td>
<td>1   0.9</td>
<td>6    1.5</td>
</tr>
<tr>
<td>No response</td>
<td>2   XX.X</td>
<td>4   XX.X</td>
<td>10  XX.X</td>
<td>16   XX.X</td>
</tr>
<tr>
<td>Total</td>
<td>60 100.0</td>
<td>235 100.0</td>
<td>122 100.0</td>
<td>417 100.0</td>
</tr>
</tbody>
</table>

TABLE 6

Frequency of response to types of fabrics used for clothing construction.

<table>
<thead>
<tr>
<th>Fabrics</th>
<th>Jr (N=21)</th>
<th>Sr (N=111)</th>
<th>13-14 (N=93)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f   %</td>
<td>f   %</td>
<td>f   %</td>
<td>f   %</td>
</tr>
<tr>
<td>Woven</td>
<td>21 29.6</td>
<td>101 30.8</td>
<td>93 38.9</td>
<td>215 33.7</td>
</tr>
<tr>
<td>Knit</td>
<td>25 35.2</td>
<td>111 33.8</td>
<td>87 36.4</td>
<td>223 35.0</td>
</tr>
<tr>
<td>Fur</td>
<td>1   0.9</td>
<td>7   2.7</td>
<td>15  6.3</td>
<td>23   3.6</td>
</tr>
<tr>
<td>Others</td>
<td>24 34.8</td>
<td>109 33.2</td>
<td>44 18.4</td>
<td>177 27.7</td>
</tr>
<tr>
<td>Total</td>
<td>94 99.6</td>
<td>328 99.9</td>
<td>239 100.0</td>
<td>638 100.0</td>
</tr>
</tbody>
</table>

1 Students could check more than one response

2 Frequency exceeds N, probable error in recording
garments made, no group had a mean less than 2 and the 13-14 grade levels had no mean less than 3. If these four items of the experience form are taken together, on the average a junior high school student has made six garments at the end of her/his first year. Assuming that most students of this level might make two garments in class, the junior high school student is not inexperienced. No judgment can be made as to the standard of construction. The means for number of garments constructed by grade levels were:

<table>
<thead>
<tr>
<th>Kind of garment</th>
<th>Jr</th>
<th>Sr</th>
<th>13-14</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blouses/tops</td>
<td>2.35</td>
<td>2.91</td>
<td>3.58</td>
<td>3.02</td>
</tr>
<tr>
<td>Pants, shorts</td>
<td>2.05</td>
<td>2.42</td>
<td>3.45</td>
<td>2.65</td>
</tr>
<tr>
<td>Dresses/robes</td>
<td>1.79</td>
<td>2.09</td>
<td>3.62</td>
<td>2.46</td>
</tr>
<tr>
<td>Others</td>
<td>2.02</td>
<td>2.04</td>
<td>3.40</td>
<td>2.42</td>
</tr>
</tbody>
</table>

Eight items were directed to specific clothing construction processes. The data are given in Table 8. Approximately 82 percent of the respondents had put in a zipper and 52 percent had inserted a zipper more than three times. On some items participants had an opportunity to indicate a lack of understanding of a term, but there was no way to identify accuracy in perception of a term if there was a response. It was with the process of "set in sleeves" that students at the senior high level indicated not understanding the term. The more advanced educational levels had the greatest proportion of respondents using "set in sleeves" in seven or more instances. Nearly 62 percent of the junior high level students had used this particular process.

Experience in application of collars was directly proportional to educational level. Although 80 percent of the junior high respondents had made blouses/tops, 45 percent had never applied a collar. This would seem to indicate that the younger respondents make garments requiring fewer processes. The mean frequency of 13-14 grade level for seven of the eight processes was higher than the total frequency mean. The one exception was the process of underlining/backing. The process having the lowest frequency mean for all groups was the bound buttonhole. The junior high level used machine buttonhole less than any other of the processes. Zipper application had the highest mean frequency for the junior and 13-14 grade levels as compared to third highest for senior high. Underlining/backing was the second highest mean frequency for senior high level but lowest for the 13-14 grade level. Within the junior high level there were respondents making seven or more of each of these processes. Also, the junior high level indicated fewer respondents.
TABLE 7
Number of responses to kinds of garments made.

<table>
<thead>
<tr>
<th>Item</th>
<th>Education level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jr</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Blouses/tops</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>1-2</td>
<td>27</td>
</tr>
<tr>
<td>3-4</td>
<td>11</td>
</tr>
<tr>
<td>5-6</td>
<td>4</td>
</tr>
<tr>
<td>7 or more</td>
<td>4</td>
</tr>
<tr>
<td>No response</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
</tr>
<tr>
<td>Pants/shorts</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>1-2</td>
<td>24</td>
</tr>
<tr>
<td>3-4</td>
<td>12</td>
</tr>
<tr>
<td>5-6</td>
<td>3</td>
</tr>
<tr>
<td>7 or more</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
</tr>
<tr>
<td>Dresses/robes</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>1-2</td>
<td>29</td>
</tr>
<tr>
<td>3-4</td>
<td>3</td>
</tr>
<tr>
<td>5-6</td>
<td>1</td>
</tr>
<tr>
<td>7 or more</td>
<td>2</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
</tr>
</tbody>
</table>
not understanding the term than did the senior high level. The 13-14 grade level had the fewest number of respondents indicating not understanding terms.

In seam construction, the plain seam was used the most frequently and the piped seam by the least number of respondents for all grade levels. Frequency of use is shown in Table 9.

**TABLE 9**

Frequency of response to use of seams.

<table>
<thead>
<tr>
<th>Educational level</th>
<th>Flatfelled</th>
<th>French</th>
<th>Lap</th>
<th>Plain</th>
<th>Piped</th>
<th>Total (N=417)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seams</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Flatfelled</td>
<td>3</td>
<td>4.8</td>
<td>45</td>
<td>14.2</td>
<td>96</td>
<td>25.7</td>
</tr>
<tr>
<td>French</td>
<td>4</td>
<td>6.5</td>
<td>27</td>
<td>8.5</td>
<td>85</td>
<td>22.8</td>
</tr>
<tr>
<td>Lap</td>
<td>18</td>
<td>29.0</td>
<td>46</td>
<td>14.5</td>
<td>74</td>
<td>19.8</td>
</tr>
<tr>
<td>Plain</td>
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<td>56.4</td>
<td>190</td>
<td>59.9</td>
<td>96</td>
<td>25.7</td>
</tr>
<tr>
<td>Piped</td>
<td>2</td>
<td>3.2</td>
<td>9</td>
<td>2.8</td>
<td>27</td>
<td>5.9</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>99.9</td>
<td>317</td>
<td>99.9</td>
<td>373</td>
<td>99.9</td>
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### TABLE 8
Number of responses to clothing construction processes

<table>
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<th>Item</th>
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<th></th>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Zipper</td>
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<td></td>
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<tr>
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<td>7.0</td>
<td>42</td>
<td>18.0</td>
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<td>0.9</td>
<td>47</td>
<td>11.7</td>
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<tr>
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<td>93</td>
<td>39.9</td>
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<td>14.4</td>
<td>140</td>
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<td>33.3</td>
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<td>10.6</td>
<td>40</td>
<td>17.2</td>
<td>57</td>
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<td>XXX</td>
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<td>235</td>
<td>100.0</td>
<td>122</td>
<td>100.0</td>
<td>417</td>
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<tr>
<td>( \bar{x} )</td>
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<td>2.7</td>
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<td>47.3</td>
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</tr>
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<td>3.4</td>
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<td>0.0</td>
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<td>XXX</td>
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<td>235</td>
<td>100.0</td>
<td>122</td>
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<td>30</td>
<td>12.9</td>
<td>45</td>
<td>40.2</td>
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<td>100.0</td>
<td>235</td>
<td>100.0</td>
<td>122</td>
<td>100.0</td>
<td>417</td>
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</tr>
<tr>
<td>( \bar{x} )</td>
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<td>2.36</td>
<td></td>
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### TABLE 8—(CONTINUED)

<table>
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<th>Total</th>
</tr>
</thead>
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<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td><strong>Machine buttonholes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>68</td>
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<td>7 or more</td>
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<tr>
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<td>1</td>
<td>0.4</td>
</tr>
<tr>
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<td>2</td>
<td>XXX</td>
<td>2</td>
<td>XXX</td>
</tr>
<tr>
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<td>170</td>
<td>73.0</td>
</tr>
<tr>
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<td>8</td>
<td>13.8</td>
<td>18</td>
<td>7.7</td>
</tr>
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<td>3</td>
<td>5.2</td>
<td>5</td>
<td>2.1</td>
</tr>
<tr>
<td>7 or more</td>
<td>1</td>
<td>1.7</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>?</td>
<td>7</td>
<td>12.1</td>
<td>35</td>
<td>14.9</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>XXX</td>
<td>2</td>
<td>XXX</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
<td>235</td>
<td>100.0</td>
</tr>
<tr>
<td>X</td>
<td>1.78</td>
<td>1.79</td>
<td>2.29</td>
<td>1.92</td>
</tr>
<tr>
<td><strong>Patch pockets</strong></td>
<td></td>
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</tr>
<tr>
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<td>107</td>
<td>45.9</td>
</tr>
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<td>48.3</td>
<td>65</td>
<td>27.9</td>
</tr>
<tr>
<td>3-6</td>
<td>14</td>
<td>24.1</td>
<td>25</td>
<td>10.7</td>
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<td>7 or more</td>
<td>7</td>
<td>12.1</td>
<td>24</td>
<td>10.3</td>
</tr>
<tr>
<td>?</td>
<td>2</td>
<td>3.4</td>
<td>12</td>
<td>5.2</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>XXX</td>
<td>2</td>
<td>XXX</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
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<td>235</td>
<td>100.0</td>
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<td>2.00</td>
<td>2.82</td>
<td>2.30</td>
</tr>
</tbody>
</table>
TABLE 8 (CONTINUED)

<table>
<thead>
<tr>
<th>Item</th>
<th>Jr N</th>
<th>Jr %</th>
<th>Sr N</th>
<th>Sr %</th>
<th>13-14 N</th>
<th>13-14 %</th>
<th>Total N</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underlining/Back up</td>
<td></td>
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<td></td>
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<td>0</td>
<td>17</td>
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<td>83</td>
<td>35.9</td>
<td>16</td>
<td>14.4</td>
<td>116</td>
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<td>59</td>
<td>25.5</td>
<td>51</td>
<td>45.9</td>
<td>129</td>
<td>32.2</td>
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<td>3-6</td>
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<td>25.2</td>
<td>67</td>
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<td>7 or more</td>
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<td>0.0</td>
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<td>2</td>
<td>XXX</td>
<td>4</td>
<td>XXX</td>
<td>11</td>
<td>XXX</td>
<td>17</td>
<td>XXX</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
<td>235</td>
<td>100</td>
<td>122</td>
<td>100</td>
<td>417</td>
<td>100</td>
</tr>
<tr>
<td>( \bar{x} )</td>
<td>2.37</td>
<td></td>
<td>2.53</td>
<td></td>
<td>2.39</td>
<td></td>
<td>2.47</td>
<td></td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>17</td>
<td>29.3</td>
<td>105</td>
<td>45.3</td>
<td>24</td>
<td>21.4</td>
<td>146</td>
<td>36.3</td>
</tr>
<tr>
<td>1-2</td>
<td>24</td>
<td>41.4</td>
<td>64</td>
<td>27.6</td>
<td>54</td>
<td>48.2</td>
<td>142</td>
<td>35.3</td>
</tr>
<tr>
<td>3-6</td>
<td>12</td>
<td>20.7</td>
<td>39</td>
<td>16.8</td>
<td>21</td>
<td>18.8</td>
<td>72</td>
<td>17.9</td>
</tr>
<tr>
<td>7 or more</td>
<td>2</td>
<td>3.4</td>
<td>8</td>
<td>3.4</td>
<td>12</td>
<td>10.7</td>
<td>22</td>
<td>5.5</td>
</tr>
<tr>
<td>?</td>
<td>3</td>
<td>5.2</td>
<td>16</td>
<td>6.9</td>
<td>1</td>
<td>0.9</td>
<td>20</td>
<td>5.0</td>
</tr>
<tr>
<td>No response</td>
<td>.2</td>
<td>XXX</td>
<td>3</td>
<td>XXX</td>
<td>10</td>
<td>XXX</td>
<td>15</td>
<td>XXX</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100</td>
<td>235</td>
<td>100</td>
<td>122</td>
<td>100</td>
<td>417</td>
<td>100</td>
</tr>
<tr>
<td>( \bar{x} )</td>
<td>2.14</td>
<td></td>
<td>1.99</td>
<td></td>
<td>2.21</td>
<td></td>
<td>2.08</td>
<td></td>
</tr>
</tbody>
</table>
Knit fabrics were the most used by both junior and senior grade levels, in comparison to the 13-14 grade level who more frequently used woven fabrics. The distribution was as follows:

<table>
<thead>
<tr>
<th>Fabrics</th>
<th>Jr</th>
<th>Sr</th>
<th>13-14</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woven</td>
<td>20</td>
<td>117</td>
<td>95</td>
<td>232</td>
</tr>
<tr>
<td>Plaids</td>
<td>22</td>
<td>71</td>
<td>91</td>
<td>184</td>
</tr>
<tr>
<td>Knits</td>
<td>25</td>
<td>139</td>
<td>91</td>
<td>245</td>
</tr>
<tr>
<td>Nap</td>
<td>12</td>
<td>89</td>
<td>72</td>
<td>173</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>406</td>
<td>349</td>
<td>834</td>
</tr>
</tbody>
</table>

All machine attachments were used by all grade levels. The seam and hem gauge had highest use followed by hemmer foot. The frequency of "others" may be accounted for by zipper foot. Distribution was:

<table>
<thead>
<tr>
<th>Machine Attachments</th>
<th>Jr</th>
<th>Sr</th>
<th>13-14</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemmer foot</td>
<td>14</td>
<td>66</td>
<td>57</td>
<td>137</td>
</tr>
<tr>
<td>Pleater</td>
<td>3</td>
<td>15</td>
<td>55</td>
<td>73</td>
</tr>
<tr>
<td>Seam and hem gauge</td>
<td>20</td>
<td>100</td>
<td>67</td>
<td>187</td>
</tr>
<tr>
<td>Binder</td>
<td>6</td>
<td>24</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td>Others</td>
<td>21</td>
<td>133</td>
<td>54</td>
<td>208</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>338</td>
<td>245</td>
<td>640</td>
</tr>
</tbody>
</table>

All pieces of equipment were used with the tailor's ham being most frequently used by the senior and 13-14 grade levels. The junior high level used the seamboard and point presser the most frequently. Distribution was:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Jr</th>
<th>Sr</th>
<th>13-14</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tailor's ham</td>
<td>11</td>
<td>111</td>
<td>80</td>
<td>202</td>
</tr>
<tr>
<td>T-Square</td>
<td>7</td>
<td>31</td>
<td>45</td>
<td>83</td>
</tr>
<tr>
<td>Seamboard and point presser</td>
<td>15</td>
<td>69</td>
<td>78</td>
<td>162</td>
</tr>
<tr>
<td>Needle board</td>
<td>7</td>
<td>39</td>
<td>28</td>
<td>74</td>
</tr>
<tr>
<td>Clapper</td>
<td>7</td>
<td>28</td>
<td>30</td>
<td>65</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>278</td>
<td>261</td>
<td>586</td>
</tr>
</tbody>
</table>
Of the hand stitches, the most frequently used was the slip stitch. All of the various stitches were used by all of the grade levels. The relative high frequency of use of "others" might be accounted for by the popularity of hand crafts and embroidery. Frequency of use was:

<table>
<thead>
<tr>
<th>Hand Stitches</th>
<th>Jr</th>
<th>Sr</th>
<th>13-14</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slip</td>
<td>26</td>
<td>149</td>
<td>97</td>
<td>272</td>
</tr>
<tr>
<td>Catch</td>
<td>10</td>
<td>108</td>
<td>93</td>
<td>211</td>
</tr>
<tr>
<td>Buttonhole</td>
<td>21</td>
<td>55</td>
<td>68</td>
<td>144</td>
</tr>
<tr>
<td>Running or</td>
<td>16</td>
<td>119</td>
<td>97</td>
<td>232</td>
</tr>
<tr>
<td>blind</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>14</td>
<td>89</td>
<td>62</td>
<td>165</td>
</tr>
<tr>
<td>Total</td>
<td>87</td>
<td>520</td>
<td>417</td>
<td>1024</td>
</tr>
</tbody>
</table>

Of the edge finishes, the zig zag received highest frequency of use by all grade levels. The bound seam was least frequently used. The bound seam requires more skills and additional fabric which may help to account for the less frequency of use. The distribution of frequencies is given below:

<table>
<thead>
<tr>
<th>Edge Finishes</th>
<th>Jr</th>
<th>Sr</th>
<th>13-14</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zig zag</td>
<td>30</td>
<td>134</td>
<td>100</td>
<td>264</td>
</tr>
<tr>
<td>Bound</td>
<td>4</td>
<td>61</td>
<td>67</td>
<td>132</td>
</tr>
<tr>
<td>Stitched</td>
<td>23</td>
<td>115</td>
<td>90</td>
<td>228</td>
</tr>
<tr>
<td>Clean finish</td>
<td>18</td>
<td>108</td>
<td>90</td>
<td>216</td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td>59</td>
<td>55</td>
<td>120</td>
</tr>
<tr>
<td>Total</td>
<td>81</td>
<td>477</td>
<td>402</td>
<td>960</td>
</tr>
</tbody>
</table>

From 55 to 68 percent of the respondents indicated some experience with pattern alterations. The higher grade level, 13-14, had the most as shown below:

<table>
<thead>
<tr>
<th>Pattern Alterations</th>
<th>Jr</th>
<th>Sr</th>
<th>13-14</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>7</td>
<td>63</td>
<td>8</td>
<td>78</td>
</tr>
<tr>
<td>Some</td>
<td>37</td>
<td>130</td>
<td>83</td>
<td>250</td>
</tr>
<tr>
<td>Many</td>
<td>1</td>
<td>27</td>
<td>22</td>
<td>50</td>
</tr>
<tr>
<td>No response</td>
<td>15</td>
<td>15</td>
<td>9</td>
<td>39</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>235</td>
<td>122</td>
<td>417</td>
</tr>
</tbody>
</table>

26
Less than 50 percent of the subjects indicated always finishing a garment. Thirty-five percent of the lower grade level, junior high, was the highest percentage of "never" and "sometimes" non-completion. This was much higher than the other two groups. Distributions were as given below:

<table>
<thead>
<tr>
<th>Completed garment</th>
<th>Jr N</th>
<th>Jr %</th>
<th>Sr N</th>
<th>Sr %</th>
<th>13-14 N</th>
<th>13-14 %</th>
<th>Total N</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>6</td>
<td>10.0</td>
<td>15</td>
<td>6.4</td>
<td>0</td>
<td>0</td>
<td>21</td>
<td>5.0</td>
</tr>
<tr>
<td>Sometimes</td>
<td>15</td>
<td>25.0</td>
<td>30</td>
<td>12.8</td>
<td>10</td>
<td>8.2</td>
<td>55</td>
<td>13.2</td>
</tr>
<tr>
<td>Almost always</td>
<td>16</td>
<td>26.7</td>
<td>79</td>
<td>33.6</td>
<td>50</td>
<td>41.0</td>
<td>145</td>
<td>34.8</td>
</tr>
<tr>
<td>Always</td>
<td>16</td>
<td>26.7</td>
<td>97</td>
<td>41.3</td>
<td>45</td>
<td>36.9</td>
<td>158</td>
<td>37.9</td>
</tr>
<tr>
<td>No response</td>
<td>7</td>
<td>11.7</td>
<td>14</td>
<td>5.9</td>
<td>17</td>
<td>13.9</td>
<td>38</td>
<td>9.1</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
<td>235</td>
<td>100.0</td>
<td>12</td>
<td>100.0</td>
<td>417</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Instrumentation

The main objective of the project was to develop a challenge test for specific content areas and levels of performance in clothing construction. Even though data were collected on the educational levels including junior high through grades 13-14, it was not intended to evaluate levels of learning by educational level. The focus was on the first level and second level of content learnings wherever these might be taught. The use of the different educational levels was directed to development of the instrument.

It appears throughout the tests that those items with multiple responses were more difficult than the single response items. A plausible explanation might be that students are more accustomed to taking tests having single response items and are not familiar with a combination of single and multiple responses.

The CCPA content areas and number of items were as follows:

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Level</th>
<th>Pencil Items</th>
<th>Paper Items</th>
<th>Psychomotor Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fashion and Fitting</td>
<td>One</td>
<td>19</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Fashion and Fitting</td>
<td>Two</td>
<td>17</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Fiber and Fabric</td>
<td>Two</td>
<td>47</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sewing Equipment</td>
<td>One</td>
<td>23</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sewing Equipment</td>
<td>Two</td>
<td>14</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Clothing Construction</td>
<td>One</td>
<td>33</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Clothing Construction</td>
<td>Two</td>
<td>19</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Clothing Care</td>
<td>One</td>
<td>11</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
Fashion and Fitting, level one, had 19 items with single responses for each item. Ninety-seven students took the test giving a mean of 11.01. The total number of cases included both males and females. The level of difficulty ranged from 0.14 to 0.86; sixteen items ranged from 0.20 to 0.80; one item at 0.14 and two items at 0.82 and 0.86 (see Table 10).

Fashion and Fitting, level two, was taken by 96 students at the senior high and 13-14 educational levels. The junior high teachers felt that their students were not ready for the second level of the test. There were 17 items with a possible 23 responses. The mean was 11.63. There were 15 items with a 0.20 to 0.80 difficulty range and four below 0.20; also four above 0.80 (see Table 10).

The total number of items for Fiber and Fabric, level two, was 47 with a possible 59 correct responses. The mean was 28.88. A total of 123 students took the test. The majority of the subjects were not enrolled in a textile class but rather a clothing construction class at either the senior high or 13-14 educational levels. There were 57 items with a level of difficulty from 0.22 to 0.76; two were below 0.20 and none above 0.80 (see Table 11).

The possible number of responses for Sewing Equipment, level one, was 25 with a possible 59 total cases from junior high, senior high and grades 13-14; the mean was 18.80. The item level of difficulty ranged from 0.44 to 0.92 with 12 items above 0.80 (see Table 11).

The total number of participants for Sewing Equipment, level two, was 101. The maximum number of responses for the test was 21; responses 1 through 17 were paper and pencil items with task performance or psychomotor testing items 18 through 21. The mean was 11.52. Of the paper and pencil responses, 11 items ranged in item difficulty from 0.37 to 0.80; three above 0.80 and two less than 0.20 (see Table 12). Three of the psychomotor tasks were above 0.90 level of difficulty and one was 0.50. Available equipment for the sewing machine was a factor to consider. The task that was the least attempted was the use of darning attachments as these were not available for all participants. Approximately 50 percent of the senior high and 13-14 educational levels performed machine blind hemming and 90 percent of the total group successfully used the sewing machine for top stitching.

Clothing Construction, level one, tests included 35 items with a possible 41 responses; items 1 through 33 had a possible 37-paper and pencil responses. Items 34 and 35
### TABLE 10

Item level of difficulty for Fashion and Fitting, levels one and two.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>% of D</th>
<th>Item No.</th>
<th>% of D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>51.4</td>
<td>1</td>
<td>77.0</td>
</tr>
<tr>
<td>2</td>
<td>71.0</td>
<td>2</td>
<td>89.0</td>
</tr>
<tr>
<td>3</td>
<td>62.3</td>
<td>3</td>
<td>83.8</td>
</tr>
<tr>
<td>4</td>
<td>15.0</td>
<td>4a</td>
<td>21.2</td>
</tr>
<tr>
<td>5</td>
<td>69.4</td>
<td>4b</td>
<td>36.4</td>
</tr>
<tr>
<td>6</td>
<td>70.4</td>
<td>4c</td>
<td>10.1</td>
</tr>
<tr>
<td>7</td>
<td>62.6</td>
<td>4d</td>
<td>57.6</td>
</tr>
<tr>
<td>8</td>
<td>76.6</td>
<td>5</td>
<td>45.0</td>
</tr>
<tr>
<td>9</td>
<td>77.0</td>
<td>6a</td>
<td>25.0</td>
</tr>
<tr>
<td>10</td>
<td>20.6</td>
<td>6b</td>
<td>68.0</td>
</tr>
<tr>
<td>11</td>
<td>47.7</td>
<td>7</td>
<td>18.0</td>
</tr>
<tr>
<td>12</td>
<td>86.0</td>
<td>8</td>
<td>27.0</td>
</tr>
<tr>
<td>13</td>
<td>71.0</td>
<td>9</td>
<td>93.9</td>
</tr>
<tr>
<td>14</td>
<td>54.2</td>
<td>10</td>
<td>69.7</td>
</tr>
<tr>
<td>15</td>
<td>70.1</td>
<td>11</td>
<td>14.1</td>
</tr>
<tr>
<td>16</td>
<td>19.6</td>
<td>12</td>
<td>80.8</td>
</tr>
<tr>
<td>17</td>
<td>66.4</td>
<td>13</td>
<td>71.7</td>
</tr>
<tr>
<td>18</td>
<td>82.2</td>
<td>14</td>
<td>79.8</td>
</tr>
<tr>
<td>19</td>
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\[
\bar{X} = 11.010 \\
\bar{X} = 11.635 \\
SD = 3.864 \\
SD = 2.761 \\
SE = 0.392 \\
SE = 0.282
\]
TABLE 11

Item level of difficulty for Fiber and Fabric, level two.

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<th>% of D</th>
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$\bar{X} = 28.886$

$SD = 0.585$

$SE = 0.684$
### TABLE 12

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\[ \bar{X} = 18.806 \quad \bar{X} = 71.525 \]

\[ SD = 4.195 \quad SD = 4.500 \]

\[ SE = 0.322 \quad SE = 0.448 \]
were performance tasks. The mean for the total group was 26.34 with a level of item difficulty range from 0.22 to 0.91. Twenty-nine of the paper and pencil items were between 0.22 to 0.80; no response was below 0.22 level of difficulty. The psychomotor tasks, items 34 and 35, were very similar in item difficulty with 0.85 and 0.87 respectively (see Table 13).

Clothing Construction, level two, was given to a total of 101 students at the senior high and 13-14 educational levels. There were 19 written items with a possible 26 responses. Items 20 through 26 were task performance items which were assessed for either right or wrong performance. The mean for the total test group was 21.19. The level of difficulty for the total test was from 0.14 to 0.90. Only one response was below 0.20 and 21 items were between 0.20 and 0.80. The two psychomotor tasks at level two of clothing construction had a 0.75 and 0.77 level of difficulty (see Table 13).

Clothing Care testing was done at only one achievement level. The instrument had 11 items with 12 responses. The mean for the total group was 7.12. Responses 1 through 7 ranged from 0.74 to 0.94 levels of item difficulty with responses 3 through 12 ranging from 0.70 to 0.61 (see Table 14). Item 8 was the most difficult.

In all but one of the tests the mean scores were at or above 50 percent of total possible scores. The one exception was for Fashion and Fabrics, level two. The mean was 28.88 with a possible score of 59. Of the total of 196 items, 54 items need improvement to meet item level difficulty. Of the 54 items, 46 were above 0.80 level of difficulty. Since this is a mastery test, these 46 items definitely should be re-examined.

The reliabilities for the CCPA were calculated for each content area. The test for internal consistency was the Kuder-Richardson. The number of items per content area was used. The reliabilities for each area of the CCPA were:

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<tr>
<td>Fashion and Fitting, level 2</td>
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</tr>
<tr>
<td>Fiber and Fabrics, level 2</td>
<td>0.757</td>
</tr>
<tr>
<td>Sewing Equipment, level 1</td>
<td>0.766</td>
</tr>
<tr>
<td>Sewing Equipment, level 2</td>
<td>0.780</td>
</tr>
<tr>
<td>Clothing Construction, level 1</td>
<td>0.895</td>
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<tr>
<td>Clothing Construction, level 2</td>
<td>0.857</td>
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<tr>
<td>Clothing Care, level 2</td>
<td>0.480</td>
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TABLE 13

Item level of difficulty for Clothing Construction, levels one and two.

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<th>% of D</th>
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\[ \bar{X} = 26.348 \quad \bar{X} = 21.194 \]

\[ SD = 8.616 \quad SD = 6.705 \]

\[ SE = 0.635 \quad SE = 0.661 \]
TABLE 14

Item level of difficulty for Clothing Care, level one.

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</tbody>
</table>

\[ \bar{X} = 7.120 \]
\[ SD = 1.418 \]
\[ SE = 0.127 \]

It is evident that two of the areas, Fashion and Fitting, level 2, and Clothing Care, level 2, need further development to increase the reliabilities. Considering the relatively few items in each of the content areas, the reliabilities are very respectable with the two exceptions noted. Fashion and Fitting, level two, also contained six poor items in the 17-item test. Clothing Care, level two, had seven poor items out of a total 11-item test. It is quite evident that these two tests need extensive revision.

As the outside criterion of student ability, each respondent was rated by her/his respective teacher. A three-point rating scale was used (see Appendix G). If students took more than one content area and/or more than one level, only one ability rating was given. Teachers felt
that attempting to do more than one rating for these students was not realistic. Teachers' ratings for students taking the various sections of CCPA are given in Table 15. The range of mean average ratings for all students was 1.24 to 2.20. The lowest mean ratings were in Fashion and Fitting, levels one and two, and Fiber, level two. Usually, these content areas are not emphasized for beginning students. No mean rating of a group of students was above average by more than 0.36. In seven instances the mean ratings of groups were below average of the total of 14 group ratings.

### TABLE 15

Teacher ratings of students for CCPA content areas.

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<th>Content Areas</th>
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<th>Sr</th>
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<th>Total</th>
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<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
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<tr>
<td>Above average</td>
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CONCLUSIONS AND RECOMMENDATIONS

The conclusions are limited to the specific parameters of the study. No generalizations are made beyond the sample. Appropriateness of application to similar situations is left to the reader.

The conclusions were as follows:

1. All educational levels, junior, senior high, 13-14 grades, had a diverse background of instruction and experience in clothing construction. Within each educational group there were inexperienced and experienced students in construction.

2. Within all groups there was a broad range in use of sewing equipment, including special features and attachments on sewing machines.

3. All students seemed to be more experienced in seam construction, hand stitches, and edge finishes than other construction processes.

4. No judgment was made as to standard of construction except what was demonstrated in psychomotor tasks.

5. Level of test achievement was directly proportional to educational level.

6. Content areas of sewing equipment and clothing construction had highest achievement levels of all content areas.

7. Psychomotor achievement was generally higher than cognitive achievement.

8. Class length of 45 to 60 minutes provided adequate time for administering various content sections of CCPA with the exception of psychomotor.

9. A challenge test in clothing construction was feasible within concerns for time, division of content, administration, grading, cognitive and psychomotor skills.

10. The CCPA demonstrated definite potential of meeting its purpose. All content areas of the CCPA, with the exception of two, Clothing Care and Fiber and Fabric, level two, could be used in its present form.

The recommendations are divided into two sections. The first presents recommendations that deal with curriculum.
The second is directed to the CCPA Instrument.

In regard to curriculum, the following recommendations are given:

1. Some kind of pretesting is essential to differentiate the experience and abilities of students.

2. Individualized instruction is inevitable if duplication of learning is to be avoided.

3. Articulation of curriculum among various educational levels needs to be furthered.

4. If any course or unit exemption is to be feasible, the curriculum must be structured with comparable units or courses.

Recommendations for the CCPA are:

1. Revision of various content areas should be continued until appropriate reliabilities are achieved.

2. Third levels of content areas should be developed wherever necessary.

3. CCPA be adapted for non-readers and bilingual students.

4. Implementation procedures be amplified and refined.

5. CCPA be initiated at community college and universities within the coming year.


ADVISORY BOARD FOR
CLOTHING CONSTRUCTION PERFORMANCE ASSESSMENT

Rita Allen
Maryvale High School
3415 N. 59th Avenue
Phoenix, Arizona

Barbara Border
Arizona Department of Education
Division of Vocational Education
1535 West Jefferson
Phoenix, Arizona 85007

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Cortez High School
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9009 North 33rd Place
Phoenix, Arizona 85028

Sylvia Phillips
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Sue Few
Chandler High School
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Chandler, Arizona 85224

Marianne Taylor
Mesa High School
1630 East Southern Avenue
Mesa, Arizona 85204

Jo Wilson
Mesa Community College
1833 West Southern Avenue
Mesa, Arizona 85201

Alma Brown
Glendale Community College
6000 West Olive Avenue
Glendale, Arizona 85301

Margaret V. Barkley
Home Economics Department
Arizona State University
Tempe, Arizona
January 19, 1976

Dear,

Thank you for indicating that you will serve on the advisory committee for the inservice curriculum project for clothing and textiles.

Our first meeting has been confirmed for Tuesday afternoon, January 27 at 3:30 p.m. in room 214 of the home economics building here at A.S.U.

Agenda for the session:

a. Overview of the project  
b. Plans for other meetings  
c. Discussing and answering your questions; such as reimbursements.

We look forward to working with you.

Sincerely,

Elizabeth Monts  
Professor of Home Economics

Betty Hunter  
Assistant Professor of Home Economics
January 29, 1976

Dear

Sorry you were unable to attend the first meeting of the advisory committee for the inservice curriculum project for clothing and textiles.

The meeting included:

a. Barbara Border gave a review of the textiles and clothing curriculum progress to date.

b. Materials were handed out and discussed. Your copies are included.

c. Charges to the advisory committee were made including:
   1. Finalizing levels of competencies for each major concept and supporting goals.
   2. Deciding on competencies to be tested, including proportion of emphasis for each competency. The developing of appropriate items, validating by judgment, field testing, revising and planning for implementation will be our responsibilities.

d. A work plan was discussed and tentative meeting times were established for: Friday, February 13, 20 and 27 from 8:30 A.M. to 4:00 P.M. in the dining room of the home economics building at A.S.U.

e. Substitute pay or per diem is available up to $30.00 per day.

Of those attending, the unanimous decision was for a school day meeting rather than an evening or Saturday one. If you feel that it is impossible for you to make the time commitment, please let us know as soon as possible because the initial stage of the curriculum should be finalized by the end of February.

Sincerely,
APPENDIX B
JURY PANEL FOR

CLOTHING CONSTRUCTION PERFORMANCE ASSESSMENT

Sandy Hutton
5603 S. Doubloon Court
Tempe, Arizona

Mary Ann Prust
2133 E. Golf Avenue
Tempe, Arizona

Jan Reed
Powell Junior High School
855 West 8th Avenue
Mesa, Arizona

Betty Ann Solomon
Star Route 1
Village of Oak Creek
Sedona, Arizona

Dori Wegner
937 E. Broadmor
Tempe, Arizona

Judy Farrar
Poston Junior High School
Mesa, Arizona

Barbara Smith
Tempe High School
Tempe, Arizona
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<td>2.3 Identifies the effect that texture of fabrics has on an individual and his/her figure type.</td>
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<td>2.4 Identifies and applies design principles to coordinate one (total look) outfit.</td>
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<td>2.2 Analyzes the effect that use of line and design have on creating a desired optical illusion.</td>
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<td>2.4 Identifies and applies design and line principles in choosing a wardrobe for self which is suitable for a variety of activities.</td>
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### 3.0 FIBER & FABRIC

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### 4.0 SEWING EQUIPMENT

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<td>Subject Matter</td>
</tr>
<tr>
<td>4.7 Pressing</td>
<td>10%</td>
</tr>
<tr>
<td>4.8 Sewing machine</td>
<td>10%</td>
</tr>
<tr>
<td>4.9 Machine use</td>
<td>20%</td>
</tr>
<tr>
<td>4.10 Use and care</td>
<td>0%</td>
</tr>
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<tr>
<td>5.7 Transfers pattern marking</td>
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<td>5.8 Stabilizing</td>
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<td>5.9 Shaping and molding</td>
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<tr>
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<tr>
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<td>4%</td>
</tr>
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<td>5.15 Hand stitches</td>
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<td>5.5 Layout and attach pattern on fabric 5%</td>
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<td>5.6 Cutting pattern 0%</td>
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<td>COMPETENCIES</td>
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<td>10%</td>
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<td>5.14 Hems</td>
<td>4%</td>
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<td>LEVEL I</td>
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<td>-------------------</td>
<td>---------</td>
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<td>Subject Matter</td>
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<td>6.1 Labels</td>
<td>5</td>
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<tr>
<td>6.2 Others</td>
<td>6</td>
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</tbody>
</table>
FIELD TEST SITES

Gilbert High School
140 S. Gilbert Road
Gilbert, Arizona

Marcos De Niza High School
6000 South Lakeshore Drive
Tempe, Arizona

Glendale High School
6216 West Glendale Avenue
Glendale, Arizona

McKemy Junior High School
2250 South College Avenue
Tempe, Arizona

Thunderbird High School
1750 W. Thunderbird Road
Phoenix, Arizona

Emerson Elementary
1817 N. 7th Street
Phoenix, Arizona

Kenilworth Elementary
1210 N. 5th Avenue
Phoenix, Arizona

Arizona State University
Tempe, Arizona
MEMORANDUM

May 3, 1976

TO: Mrs. Betty Hunter
Department of Home Economics

FROM: H. B. Hunnicutt

SUBJECT: Research Project Involving Human Subjects

The University Interdisciplinary Committee on Human Experimentation has approved your application for the project entitled "Clothing Construction Performance Assessment."

We are enclosing a copy of the ASU Rules Governing the Participation of Human Beings in Research for your information and future reference. Please sign below indicating your willingness to comply with these procedures and return one copy to us for your files.

HBH: js
Enclosure

Date

Betty Hunter
Dear

The competency based Clothing and Textiles Curriculum Guide is in the final stage of development.

We are now ready to validate and refine an instrument for testing basic clothing construction, utilizing competency based standards for first, second and third levels.

Would you participate as a field site and have your students test the instrument? No names but numbers will be used and any human risk factors have been cleared through the University.

The items will be delivered and either you or I can administer them. Grading, etc., will be completed here at A.S.U. March is anticipated for the first field tests and you will receive $15 for your participation. Your students will only need sewing equipment such as, scissors, pins, tape measure, etc. We will furnish the fabric, thread and any notions.

If you have any questions, please feel free to call me at my office number 965-7781 or call the main office 965-3270 and leave a message.

We realize that you have a full teaching schedule but the value of your cooperation cannot be underestimated. You will be called for your response.

Thank you for any consideration you can give this request.

Sincerely,

Betty Hunter
Project Director
Arizona State University
2-19-76

RESPONSE SHEET FOR FIELD TEST PLANNING

DATE

SCHOOL: ____________________________

PHONE: ____________________________

TEACHER: ____________________________

Total Enrollment in Clothing Classes ____________

Levels ____________

Semester ____________

Other ____________

Length of Class Period ____________

Schedule

<table>
<thead>
<tr>
<th>M</th>
<th>T</th>
<th>W</th>
<th>Th</th>
<th>F</th>
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</thead>
</table>

Vacation Time ____________

How far in advance do you need to be notified? ____________

Do you prefer giving it? ____________

Administrative Approval: ____________
Dear

Enclosed is the information concerning a request that I am making to involve some students of the Gilbert district to assist with validating and refining a Clothing Construction Performance Assessment. If you need additional information, please let me know. My phone is 965-7781.

Enclosures:
- Protocol of Project
- Safety Measures
- Letter to teacher
- Letter to parent
- Consent form

Would you please present this to your next Board of Education meeting and inform me of their decision.

Thank you very much for your assistance.

Sincerely yours,

Betty Hunter, Assistant Professor
Home Economics Department
Arizona State University

BH6: Encl.
Dear Parent:

A competency based Clothing and Textile curriculum guide for Arizona Schools is in the final stage of development. We are ready to validate and refine an instrument for testing basic clothing construction skills and processes utilizing competency based standards for first, second, and third levels of achievement. In order to assess the value of the tests, it should be used by students.

Each student's identity will remain anonymous. The project is under the direction of Mrs. Betty Hunter, Department of Home Economics, Arizona State University, where the scoring and analysis will be completed.

If for any reason, you do not wish your child to participate, please sign the enclosed form and have him/her return it to the home economics teacher.

Thank you for your consideration given to this request.

Sincerely,

Betty Hunter, Assistant Professor
Home Economics Department
Arizona State University.
CONSENT FORM FOR CLOTHING
ASSESSMENT PROJECT

I, ________________________________, the (Father, (Mother),
(Legal Guardian) do not wish to have ____________________
a minor, participate in the study.

Date ____________________________
Signature _________________________
Witness __________________________
(May be any adult)
CLOTHING CONSTRUCTION PERFORMANCE ASSESSMENT

RATING SHEET

Directions: Please rate each student as to your perception of his or her ability for the specific content area. Carefully check to make certain that the student code number is the same on both answer and rating sheets. Student is identified only by number not by name.

<table>
<thead>
<tr>
<th>Code Number 1</th>
<th>Below Average</th>
<th>Average</th>
<th>Above Average</th>
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</tbody>
</table>

Below Average | Average | Above Average

Example Code Number 1
CLOTHING CONSTRUCTION PERFORMANCE ASSESSMENT

Grading Criteria for Psychomotor (Task I-IV)

4. Sewing Equipment - Level II

Scale 0 to 3 - 0 = none
1 = below average
2 = average
3 = above average

Record on answer sheet: Mark A if 1.4 or less
Mark B if 1.5 or above
### 4. 1-15. I. Edge Finish

<table>
<thead>
<tr>
<th>Appropriate stitch</th>
<th>Evenness of stitch (size, tension, neatness)</th>
<th>Placement</th>
<th>Total Score Average</th>
</tr>
</thead>
</table>

Total Score _______ 3 = Score

### 4. 1-16. II. Darning

<table>
<thead>
<tr>
<th>Appropriate stitch</th>
<th>Evenness of stitch (size, tension, neatness, area filled)</th>
<th>Placement (hole covered)</th>
<th>Total Score Average</th>
</tr>
</thead>
</table>

Total Score _______ 3 = Score

### 4. 1-17. III. Machine Blind Stitch

<table>
<thead>
<tr>
<th>Appropriate stitch</th>
<th>Evenness of stitch (size, tension on both wrong and right sides)</th>
<th>Placement</th>
<th>Total Score Average</th>
</tr>
</thead>
</table>

Total Score _______ 3 = Score

### 4. 1-18. IV. Top Stitching

<table>
<thead>
<tr>
<th>Appropriate stitch</th>
<th>Evenness of stitch (length, tension)</th>
<th>Placement</th>
<th>Total Score Average</th>
</tr>
</thead>
</table>

Total Score _______ 3 = Score
CLOTHING CONSTRUCTION PERFORMANCE ASSESSMENT

Grading Criteria for Psychomotor (Task V-VI)

Code No. __________
Date __________

5. Clothing Construction - Level I

Scale 0 to 3 - 0 = none
1 = below average
2 = average
3 = above average

Record on answer sheet: Mark A if 1.4 or less
Mark B if 1.5 or above
5. 1-34. V. Hand Stitches

Raw edge turned
One inch hem (width & even)
Appropriate stitch (whip & slip)
Evenness of stitch (length & tension)
Placement
Outside appearance

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Average</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td></td>
<td></td>
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</tbody>
</table>

5. 1-35. VI. Machine Stitching

5/8 inch seam allowance
Evenness of stitch (length, tension)
Placement (square corner)

<table>
<thead>
<tr>
<th>Total Score</th>
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<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
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</tbody>
</table>
CLOTHING CONSTRUCTION PERFORMANCE ASSESSMENT

Grading Criteria for Psychomotor (Task VII-XIII)

5. Clothing Construction - Level II

Scale 0 to 3 - 0 = none
1 = below average
2 = average
3 = above average

Record on answer sheet: Mark A if 1.4 or less,
Mark B if 1.5 or above
5. II.
(20. VII)  
Hand Stitches

- One inch hem allowance (even width and size)
- Catch stitch
- Blind stitch
- Evenness of stitch (length and tension)
- Placement
- Appropriate outside appearance

Total Score: 6

5. II.
(21. VIII)  
Cutting and Joining Bias Fabric Pieces

- 2 inch wide
- Bias cut
- Seam--bias direction
- Evenness of stitches (length and tension)
- Continuous strip
- Edges smoothly cut

Total Score: 6

5. II.
(22. IX)  
Closure - Lap Zipper

- Lap size (approximately ½ inch)
- Lap covers teeth, slide and under stitches
- Lap fold smooth (without picks or cuts)
- Underside of lap permanently attached
- Evenness of top stitching (length and tension)
- Neatness - pressing (lower edge)

Total Score: 6
5. II. Closure - Buttonhole
   (hand or machine)
   Appropriate stitch..............................
   Evenness of stitch..............................
   Appropriately cut..............................

   Total Score Average
   Total Score _______ 3 = Score

5. II. Joining - Fabric Pieces
   (24. XI)
   Appropriate seam (flat-fell or French)
   Appropriate width (continuous)...
   Evenness of stitch
   (length and tension)

   Total Score Average
   Total Score _______ 3 = Score

5. II. Pattern Marking - Tailor Tack
   (25. XII)
   Appropriate stitch (size and length)
   Placement
   Cutting

   Total Score Average
   Total Score _______ 3 = Score

5. II. Joining - Fabric Pieces
   (26. XIII)
   Evenness of stitch (length and tension)
   Clipping, layering, or grading
   Neatness - pressing

   Total Score Average
   Total Score _______ 3 = Score
May 17, 1976

Information and Directions for Teachers Participating in Field Testing:

1. Code number (1-1001 for Jr. High; 200-2001 for Sr. High; 3-400 for grades 13-14) is written on each answer sheet in the identification block. Please teach each student to fill in or darken the appropriate spaces in the identification block. This includes writing the number in the block of spaces on the left side of the unit.

2. All answers should be recorded on the answer sheets; not the test.

3. Evaluation of the student's ability should be made for each content area that the student takes. Use same code numbers but evaluate for the specific content area.

4. File folders are provided for answer sheets, background experiences, and each content area. Fabric, thread and notions are provided for psychomotor tasks.

5. A consent form must be sent home with each student.

6. Enclosures:
   Coding and Rating forms
   Folders for answer sheets
   Pencils

7. Please include your social security number and address so that we may process your stipend.

8. Thank you very much and you may call for me to pick up all of the materials. The best number to call would be the main office of Home Economics, 965-3270, and leave a message.
Dear

Enclosed are copies of the Clothing Construction Performance Assessment instruments. These have been developed from the concept that if a student can demonstrate minimum level of competencies for both cognitive (paper and pencil) and psychomotor (task performance), then the student should be able to move on to new learnings. The results of student performance will enable the teacher to make best use of new experiences for the student.

The instruments utilize the new textile and clothing curriculum guides that will be available for all teachers this fall (anticipate in August). Many teachers have been involved in establishing the basic areas to be included. These areas are: fashion and fitting, fiber and fabric, sewing equipment, clothing construction, and clothing care. In addition, the competencies for each area were delineated. From these competencies, items were developed and validated by a jury panel of teachers for three levels of learning. Throughout this entire process, teachers from junior/senior high and community colleges have been consulted.

Specifically, the Clothing Construction Performance Assessment includes:

1. Background Experience
2. Fashion and Fitting
   Level I
   Level II
3. Fiber and Fabric
   Level I
   Level II
4. Sewing Equipment
   Level I
   Level II
5. Clothing Construction
   Level I
   Level II
6. Clothing Care
   Level I

Items
1-25
1-19
1-17
1-47
1-23
1-18
1-35
1-26
1-11

Thank you very much for your assistance.

Sincerely yours,

Betty Hunter
Project Director
Arizona State University
Dear

The field testing for the Clothing Construction Performance test is completed and has been very successful.

My sincere thanks go to you, your students and your administration for giving time, energies and expertise for testing the instrument.

We feel very confident that the outcome of the test will benefit both the teacher and her students. When the student demonstrates minimum level of competencies for both the cognitive (paper and pencil) and psychomotor (task performance) then the student should be able to move on to new learnings.

Again, thank you very much for your assistance. Your consultant fee is being processed and should be received during June.

Sincerely yours,

Betty Hunter
Project Director
Arizona State University
CLOTHING CONSTRUCTION PERFORMANCE ASSESSMENT

Identification Number ___________________________ Date __________________

STUDENT BACKGROUND EXPERIENCES

Directions:
1. If you have not had any clothing construction classes, courses, or learning experiences, do not complete this material. Please return to teacher.

2. If you have had any learning experiences related to clothing construction, complete items 1 - 25.

3. Use a lead pencil and black-out the appropriate space on the answer sheet. You may have more than one answer for some of the questions.

4. When you have completed the questionnaire return it and the answer sheet to the teacher.

Example: Questionnaire

1. How many clothing construction classes have you had at school?
   A. 0
   B. 1
   C. 2
   D. 3
   E. 4

   Answer Sheet
   (One is my answer) A. ===
   B. ===
   C. ===
   D. ===
   E. ===

1. What is the total number of clothing construction courses that you have taken in school?
   A. 0
   B. 1
   C. 2
   D. 3
   E. 4

2. How many courses of clothing construction have you taken from places outside of school such as 4H, Stretch and Sew stores and/or machine companies?
   A. 0
   B. 1-2
   C. 3-6
   D. 7-10
   E. 11 or more
3. Have you learned about clothing construction from any other sources (such as your family, neighbor, and/or self-taught)?
   A. No
   B. Yes
   C. If yes, little
   D. If yes, some
   E. If yes, great deal

4. How much sewing do you do?
   A. Make none of my clothes
   B. Make some of my clothes
   C. Make most of my clothes
   D. Sew for others

5. What types of fabrics have you used for clothing construction?
   A. Woven
   B. Knits
   C. Fur
   D. Others

Approximately how many kinds of garments have you made? (Items 6 - 9)

6. Blouses/tops?
   A. 0
   B. 1-2
   C. 3-4
   D. 5-6
   E. more

7. Pants/shorts?
   A. 0
   B. 1-2
   C. 3-4
   D. 5-6
   E. more

8. Dresses/robes?
   A. 0
   B. 1-2
   C. 3-4
   D. 5-6
   E. more

9. Other garments?
   A. 0
   B. 1-2
   C. 3-4
   D. 5-6
   E. more
How many processes have you completed? (Items 10-17)

10. Zipper?
   A. 0
   B. 1-2
   C. 3-6
   D. 7 or more
   E. Can not answer. Do not understand.

11. Collars?
   A. 0
   B. 1-2
   C. 3-6
   D. 7 or more
   E. Can not answer. Do not understand.

12. Set-in sleeves?
   A. 0
   B. 1-2
   C. 3-6
   D. 7 or more
   E. Can not answer. Do not understand.

13. Machine buttonholes?
   A. 0
   B. 1-2
   C. 3-6
   D. 7 or more
   E. Can not answer. Do not understand.

14. Bound buttonholes?
   A. 0
   B. 1-2
   C. 3-6
   D. 7 or more
   E. Can not answer. Do not understand.

15. Patch pockets?
   A. 0
   B. 1-2
   C. 3-6
   D. 7 or more
   E. Can not answer. Do not understand.
16. Underlinings - backings?
   A. 0
   B. 1-2
   C. 3-6
   D. 7 or more
   E. Can not answer. Do not understand.

17. Linings?
   A. 0
   B. 1-2
   C. 3-6
   D. 7 or more
   E. Can not answer. Do not understand

Mark if you have made at least one and/or used one. (Items 18 - 24)

18. Seams?
   A. Flat Fell
   B. French
   C. Lap
   D. Plain
   E. Piped

19. Fabrics?
   A. Woven
   B. Plaids
   C. Knits
   D. Nap

20. Machine Attachments?
   A. Hemmer foot
   B. Pleater
   C. Seam and hem guide
   D. Binder
   E. Others

21. Equipment?
   A. Tailor’s ham
   B. T-square
   C. Seam board and point presser
   D. Needle board
   E. Clapper

22. Hand stitches?
   A. Slip
   B. Catch
   C. Buttonhole
   D. Running or blind
   E. Others
23. Edge finishes?
   A. Zig-zag
   B. Bound
   C. Stitched
   D. Clean finish
   E. Others

24. Pattern alterations?
   A. None
   B. Some
   C. Many

25. Do you complete garments that you start?
   A. Never
   B. Sometimes
   C. Almost always
   D. Always
2. FASHION AND FITTING – LEVEL I

ENCLOSURES:

Answer sheet

Experience Form

Written items 1 through 19
including folders

(items 0 through 0)

Task (performance) 0 through 0
including folders 0 through 0
2. FASHION AND FITTING - LEVEL I

DIRECTIONS:
A. Read each question and all possible answers.
B. When you have decided which answer(s) is correct, blacken the corresponding space on the answer sheet with a pencil.
C. Some questions have one answer; others have more than one answer.
D. When you have completed the test, return the test and answer sheet to your teacher.

1. Value of a color is:
A. How color is applied
B. How it feels or appears to feel
C. The lightness or darkness of color
D. The brightness or dullness of the color

2. The intensity of a color refers to:
A. Brightness or dullness of the color
B. The name of the color
C. Tints of color
D. Shades of color

3. On the color wheel, complementary colors are:
A. Opposite each other
B. Next to each other
C. Two colors away
D. The same color

4. Tints and shades refer to:
A. Hue
B. Value
C. Intensity
D. Balance

5. Color that gives a feeling of coolness:
A. Orange
B. Red
C. Blue
D. Yellow

6. An object of light color as compared to the same size object of dark color will appear:
A. Larger
B. Smaller
C. Same size
7. An object of high color intensity as compared to the same size and color object of low intensity, will appear to be:

A. Small
B. Larger
C. Same size

8. The most attention could be directed to a part of the body by using:

A. The same color
B. Contrasting colors
C. Tints of the same color
D. Shades of the same color

9. An object of vertical lines as compared to same size object of horizontal lines appears to be:

A. Taller
B. Shorter
C. Wider
D. Same

10. From the drawings, an example of informal balance is:

A. 
B. 
C. 
D. 

11. The line which appears to add the most length to a garment is one from the:

A. Neckline to the waistline
B. Neckline to the hemline
C. Neckline to the hip line
D. Waistline to the hemline
12. The combination of shapes in a design that would create harmony are:
   A. All different shapes
   B. Related shapes
   C. Unrelated shapes

13. The line for a short person who wishes to appear taller is a:
   A. Curved line
   B. Horizontal line
   C. Vertical line
   D. Diagonal line

14. A sense of motion in design is produced by:
   A. Emphasis
   B. Proportion
   C. Rhythm
   D. Scale

15. The center of interest of a garment is referred to as:
   A. Emphasis
   B. Proportion
   C. Rhythm
   D. Balance

16. A design is more visually pleasing if it is in:
   A. Four equal parts
   B. One part
   C. Two equal parts
   D. Unequal parts

17. Assuming that color and design of a garment are the same, the appearance of bulk would be decreased if the fabric texture is:
   A. Smooth
   B. Rough
   C. Clinging
   D. Nubby
   E. Fluffy

18. Surface quality of a fabric refers to:
   A. Texture
   B. Intensity
   C. Value
   D. Tint

19. Texture is created by the:
   A. Fiber, weave and color of fabric
   B. Color of the fabric
   C. Weave of the fabric
   D. Color and weave of the fabric
CLOTHING CONSTRUCTION PERFORMANCE ASSESSMENT

DATE

ENCLOSURES:
Answer Sheet
Experience Form
Written items 1 through 4 including folders (2)
(items 5 through 17)
Task (performance) 0 through 0 including folders 0 through 0

2. FASHION AND FITTING - LEVEL II.
2. FASHION AND FITTING - LEVEL II

DIRECTIONS:

A. Read each question and all possible answers.
B. When you have decided which answer(s) is correct, blacken the corresponding space on the answer sheet with a pencil.
C. Some questions have one answer; others have more than one answer.
D. When you have completed the test, return the test and answer sheet to your teacher.

NOTE: Items 1 through 4 are related to the following situation:

It is the first day after the close of the spring semester and Jody is going for a job interview. She wears a navy blue pant suit, with a navy blue and gold striped neck scarf.

1. The navy blue color would make Jody appear to be:
   A. Cooler
   B. Warmer
   C. No effect

2. Because navy blue will:
   A. Reflect heat
   B. Absorb heat
   C. Have no effect

3. Jody selected an accent that would draw attention to:
   A. Waist
   B. Hips
   C. Face
   D. Legs

4. The principle of accent in color has been used by:
   A. Change of color
   B. Placement of color
   C. Amount of color changes
   D. Complimentary colors

CONTINUED ON PAGE 2
SAMPLE 1

Fabric A

(velveteen)

Fabric B

(satin)
Items 5 through 8 refer to the fabrics in Sample 1, fabric A. and B.

5. When comparing textures of same color satin and velvet, velvet is:
   A. Softer
   B. Harder
   C. Smoother
   D. Pebblier

6. This is an example of how texture is influenced by:
   A. Weave
   B. Pile
   C. Finish
   D. Color

7. If the same size and style pattern were made from each of the fabrics, the velvet would make one appear:
   A. Larger
   B. Smaller
   C. None

8. Because:
   A. Light reflection
   B. Light absorption
   C. Soft texture
   D. Hard texture

CONTINUED ON PAGE 3 (Folder)
NOTE: Items 9 through 17 are related to the following T-shirt designs.

DIAGRAM I

1.

2.

3.

4.
NOTE: Items number 9 through 17 refer to the T-shirt designs, diagram 1.

9. Rickie is making a T-shirt. If he selects pattern and design number 1, it will tend to make him appear:
   A. Taller
   B. Shorter
   C. Wider
   D. No difference

10. Because for T-shirt number 1, the design principle is:
   A. Vertical stripes add height
   B. Vertical stripes add width
   C. Wide, evenly spaced vertical stripes add width
   D. Narrow evenly spaced vertical stripes add height

11. If he chooses T-shirt number 2 pattern and design it will tend to make him appear:
   A. Taller
   B. Shorter
   C. No different

12. Because for T-shirt number 2 the principle is that the eye is attracted to:
   A. Side seams
   B. Center front
   C. Sleeves
   D. Lower edge
   E. No special place

13. If he chooses T-shirt number 4, he will emphasize:
   A. Chest
   B. Waist
   C. Height
   D. Shoulders

14. Because the stripes in number 4 will make the area appear:
   A. Larger
   B. Smaller
   C. No different

15. For T-shirt number 4, the principle is:
   A. Placement of lines
   B. Direction of lines
   C. Repeat of lines
   D. Lines follow silhouette

16. Informal balance is used in T-shirt(s):
   A. 1
   B. 2
   C. 3
   D. 4
   E. None

(Continued on next page)
17. Because informal balance is:

A. Symmetrical
B. Asymmetrical
C. Non-symmetrical
3. FIBER AND FABRIC - LEVEL II

ENCLOSURES:
Answer sheet
Experience Form
Written items 1 through 47
including folders
(items 0 through 0)
Task (performance) 0 through 0
including folders 0 through 0
DIRECTIONS:

A. Read each question and all possible answers.
B. When you have decided which answer(s) is correct, blacken the corresponding space on the answer sheet with a pencil.
C. Some questions have one answer; others have more than one answer.
D. When you have completed the test, return the test and answer sheet to your teacher.

1. Of the natural fibers, the least flammable is:
   A. Cotton
   B. Linen
   C. Wool

2. Of the natural fibers, the one that wrinkles the least is:
   A. Cotton
   B. Linen
   C. Wool

3. Of the natural fibers, the one most resistant to damage from moths and silverfish is:
   A. Cotton
   B. Linen
   C. Wool

4. The one natural fiber that loses the most strength when wet is:
   A. Cotton
   B. Linen
   C. Wool

5. Of the natural fibers, the one that presents the most problems with the removal of odor and soil is:
   A. Cotton
   B. Linen
   C. Wool

6. Cotton, wool, and linen have which of the following characteristics in common:
   A. Durability
   B. Flammability
   C. Absorbency
   D. Resiliency
7. The fiber having the greatest tensile strength is:
   A. Modacrylic
   B. Acrylic
   C. Nylon
   D. Orlon

8. The fiber having the highest resistance to abrasion is:
   A. Cotton
   B. Wool
   C. Nylon
   D. Orlon
   E. Acetate

9. Of the listed fabrics, the weakest is:
   A. Nylon
   B. Polyester
   C. Rayon
   D. Acetate
   E. Spandex

10. Comparing natural fibers with man-made fibers, the absorbency is:
    A. Greater for natural fibers
    B. Greater for man-made fibers
    C. The same for both man-made and natural fibers

11. The fiber most resistant to wrinkling is:
    A. Nylon
    B. Polyester
    C. Linen
    D. Rayon

12. The two fibers having greatest similarities of characteristics in the following pairs are:
    A. Arnel - triacetate
    B. Acetate - nylon
    C. Rayon - triacetate
    D. Arnel - nylon

13. Comparable blouses, except for fiber content, the blouse which would dry the quickest is:
    A. Cotton
    B. Wool
    C. Rayon
    D. Polyester
14. In comparison to the natural fibers, the man-made fibers are more resistant to:
   A. Mildew
   B. Silverfish and/or moths
   C. Moisture

15. The dimensional stability of polyester is:
   A. Excellent
   B. Good
   C. Fair
   D. Poor

16. Oil stains would be the most difficult to remove from:
   A. Wool
   B. Cotton
   C. Polyester
   D. Acetate

17. Rayon is characterized by:
   A. Mildew resistance
   B. Draping well
   C. Not shrinking
   D. Non-absorbency

18. Spandex:
   A. Has low recovery power
   B. Is damaged by heat
   C. Has low absorbency
   D. Shrinks from exposure to water

19. When fibers are blended they assume characteristics that are:
   A. Completely different from the characteristics of the original fibers
   B. Only those of the major fiber
   C. Only those of the minor fiber
   D. Dependent on fiber proportions

20. Half cotton and half polyester blends would give a fabric that is:
   A. More absorbent than cotton
   B. Less absorbent than cotton
   C. More wrinkle resistant than cotton
   D. Less wrinkle resistant than cotton

21. In blended fibers, the characteristics of the weaker fiber should be considered in:
   A. Care
   B. Construction
   C. Use
   D. Cost
22. The main purpose of blending fibers is to:
   A. Decrease costs
   B. Improve qualities of fabrics
   C. Decrease the qualities of fabrics
   D. Improve washability

23. A difference in fabric characteristics occurs when combining a man-made fiber with natural fibers, if a minimum percent of man-made fiber added is:
   A. 5%
   B. 10%
   C. 15%
   D. 20%
   E. 30%

24. The best way for a customer to identify various yarns is by the:
   A. Burning test
   B. Acetone test
   C. Chlorine test
   D. Label

25. The generic term for the twisting or grouping of fibers is:
   A. Yardage
   B. Yarn
   C. Thread
   D. Fabric

26. Properties or characteristics that influence a yarn are:
   A. Content
   B. Structure
   C. Finish
   D. Length

27. Using identical yarns, a triple ply yarn compared to a double ply will be:
   A. Weaker
   B. The same
   C. Stronger
   D. More resilient

28. Staple fibers are:
   A. Long
   B. Short
   C. Both long and short
   D. Only natural fibers

29. The main difference between a filament fiber and a staple fiber is:
   A. Length
   B. Weight
   C. Color
   D. Strength
NOTE: Items 30 through 33 relate to weave diagrams.

DIAGRAM I

30. From the fabric drawings, number one is:
   A. Twill weave
   B. Plain weave
   C. Knit
   D. Satin weave

31. From the fabric drawings, number two is a:
   A. Twill weave
   B. Plain weave
   C. Knit
   D. Satin weave

32. From the fabric drawings, number three is a:
   A. Twill weave
   B. Plain weave
   C. Knit
   D. Satin

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33. From the fabric drawings, number four is a:
   A. Twill weave
   B. Plain weave
   C. Knit
   D. Satin weave

34. When comparing knit, plain and twill weaves, the weave having the greatest stretch is:
   A. Knit
   B. Plain
   C. Twill

35. When comparing knit, plain and twill weaves, the weave having the least stretch is:
   A. Knit
   B. Plain
   C. Twill

36. When comparing knit, plain and twill weaves, the strongest weave is:
   A. Knit
   B. Plain
   C. Twill

37. If the design on a fabric is lighter in color on one side than the other, the design is:
   A. Printed
   B. Woven
   C. Embossed

38. Stock dying is done to the:
   A. Fiber
   B. Yarn
   C. Woven cloth
   D. Bolt

39. The design process that uses wax is:
   A. Batik
   B. Tie Dying
   C. Screen printing
   D. Block

40. If after laundering two new cotton blouses, blouse A is limper than blouse B, the difference is due to:
   A. Sizing
   B. Napping
   C. Embossing
   D. Brushing
41. Shape-retentive finishes reduce the tensile strength of cotton approximately:
   A. 0 - 9%
   B. 10 - 29%
   C. 30 - 49%
   D. 50 - 69%
   E. 70 or more %

42. A flame-retardant finish is:
   A. Permanent for life of garment
   B. Less effective with increased laundering
   C. Less effective with increased dry cleaning
   D. Permanent in soft water

43. The greatest draping qualities would be in:
   A. Wool tweed
   B. Cotton corduroy
   C. Nylon tricot

44. The term "hand" refers to:
   A. Draping qualities
   B. Feel of fabric
   C. Design of fabric
   D. Weave of fabric

45. Textile labels must include:
   A. Generic fiber names
   B. Trademark fiber names
   C. Type of dye used
   D. Fabric weave

46. Care instructions must be attached to ready-to-wear garments:
   A. Permanently on outside
   B. Permanently on inside
   C. Permanently
   D. Removable label (pin, string)

CONTINUED ON PAGE 8
7. The most accurately printed design on the crosswise grainline in Diagram II is:

A. Number 1
B. Number 2
C. Number 3
CLCING CONSTRUCTION PERFORMANCE ASSESSMENT

Date

4. SEWING EQUIPMENT – LEVEL I

ENCLOSURES:

Answer Sheet

Experience Form

Written items through including folders (1)

(items through )

Task (performance) through including folders through
4. SEWING EQUIPMENT - LEVEL I

DIRECTIONS:

A. Read each question and all possible answers.
B. When you have decided which answer(s) is correct, blacken the corresponding space on the answer sheet with a pencil.
C. Some questions have one answer; others have more than one answer.
D. When you have completed the test, return the test and answer sheet to your teacher.

1. The most accurately measuring piece of equipment for straight of grain is:
   A. Cloth tape
   B. Paper tape
   C. Yard stick
   D. Plastic tape

2. To avoid picking or piercing yarns, pins and needles should be:
   A. Ball point
   B. Straight point
   C. Wedge point
   D. Bank point

3. In selecting scissors and shears, one should:
   A. Buy what is on sale
   B. Buy the most expensive
   C. Buy the best quality
   D. Purchase least expensive

4. The best piece of equipment for taking body measurements is:
   A. Plastic tape measure
   B. Cloth tape measure
   C. Yarn
   D. Dressmakers guide (seam gauge)

5. From the diagram select the most important places to take body measurements:

   [Diagram]

   - A. 1" above bust (chest)
   - B. Bust (chest)
   - C. Waist
   - D. 7" - 9" below waist
   - E. 10" - 12" below waist

DIAGRAM I
6. The best type of cutting equipment to select for long slashes is:
   A. Shears
   B. Embroidery scissors
   C. Rip-stitch scissors
   D. Scissors

7. The marking tool that will transfer the finest continuous line on a plain, woven, smooth fabric is:
   A. Clay chalk
   B. Wax chalk
   C. Tracing wheel
   D. Black board chalk

8. The best size machine needle to use with size 50 thread is:
   A. 9 – 10 (60 – 70)
   B. 12 – 14 (80 – 90)
   C. 16 – 18 (100 – 110)

9. The best size of ball point pins for most fabrics is:
   A. 0 – 10
   B. Medium to fine
   C. Large
   D. Makes no difference

10. The type of iron that would be best for use during sewing is:
    A. Dry iron
    B. Combination dry and steam
    C. Combination dry, and steam and spray

11. The type of water to be used in a steam iron is:
    A. Distilled
    B. Softened water
    C. Hard

12. The best fabric for a press cloth is:
    A. Weighted silk
    B. Sized cotton
    C. Non-sized cotton muslin
    D. Perma-press

CONTINUED ON PAGE 3
13. The third step in threading the machine is:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5

14. The fourth step is:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5
16. When machine stitching and loops are forming on the top of the stitching line, the tension is checked and it seems to be balanced, one should next:

A. Ignore the problems
B. Check the threading
C. Call the repairman
D. Change thread

17. From diagram III select the machine stitches that the upper tension is too tight and the lower tension is too loose.

A. 

B. 

C. 

DIAGRAM III

18. The part of the sewing machine which needs to be cleaned most frequently is:

A. Around the balance wheel
B. Tension area
C. Feed dog and bobbin area
D. Thread guides

CONTINUED ON PAGE 5 (in folder)
Items 19 through 23 refer to the sewing machine Diagram IV.
NOTE: Items 19 through 23 refer to the sewing machine Diagram IV.

19. The balance wheel on the sewing machine is:
   A. 
   B. 
   C. 
   D. 
   E. 

20. The take up lever on the sewing machine is:
   A. 
   B. 
   C. 
   D. 
   E. 

21. The tension on the sewing machine is:
   A. 
   B. 
   C. 
   D. 
   E. 

22. The thread guide on the sewing machine is:
   A. 
   B. 
   C. 
   D. 
   E. 

23. The stitch regulator is:
   A. 
   B. 
   C. 
   D. 
   E.
4. SEWING EQUIPMENT - LEVEL II

ENCLOSURES:
Answer Sheet
Experience Form
Written items 1 through 14
including folders
(items 0 through 0)
Task (performance) I through IV
including folders 1, for items
15 through 18

CLOTHING CONSTRUCTION PERFORMANCE ASSESSMENT
4. SEWING EQUIPMENT - LEVEL II

DIRECTIONS:
A. Read each question and all possible answers.
B. When you have decided which answer(s) is correct, blacken the corresponding space on the answer sheet with a pencil.
C. Some questions have one answer; others have more than one answer.
D. When you have completed the test, return the test and answer sheet to your teacher.

1. The best equipment for establishing right angle corners is:
   A. Yard stick
   B. Ruler
   C. T-square
   D. Tape measure

2. For a very open weave, such as lace, the best item or items for attaching the pattern is:
   A. Hand needles
   B. Fine straight pins
   C. Magic tape
   D. Double face tape

3. The equipment to use for cutting out knits is:
   A. Blunt nosed scissors
   B. Embroidery scissors
   C. Knife-edge scissors
   D. Pinking shears

4. The equipment to use for clipping thread is:
   A. Blunt nosed scissors
   B. Embroidery scissors
   C. Knife-edge scissors
   D. Pinking shears

5. The equipment to use for trimming and grading is:
   A. Blunt nosed scissors
   B. Embroidery scissors
   C. Knife-edge scissors
   D. Pinking shears

6. The thread that has the most stretch is:
   A. Cotton mercerized
   B. Cotton
   C. Cotton covered polyester
   D. Polyester
7. For hand stitching, the thread that is most likely to tangle and knot is:
   A. Cotton mercerized
   B. Cotton
   C. Cotton covered polyester
   D. Polyester

8. The type and size machine needle that should be used for a man-made, light weight, knit fabric is:
   A. Ball point -- 9 to 11
   B. Straight point -- 9 to 11
   C. Ball point -- 12 to 14
   D. Straight point -- 16 to 18

9. The thread that is transparent, strong and resistant to wear is:
   A. Cotton
   B. Nylon
   C. Polyester and silk
   D. Cotton and polyester

10. Thread that is sized alphabetically is:
    A. Silk
    B. Polyester
    C. Nylon
    D. Cotton
    E. None

11. Pressing equipment that should be used for an eased or shaped seam is:
    A. Point presser
    B. Tailor's ham
    C. Sleeve board
    D. Needle point board

12. The best type of press cloth to use for pressing a sheer, light weight fabric is:
    A. Wool
    B. Heavy muslin
    C. Cheese cloth
    D. Heavy dacron

13. The problem that causes the machine to skip stitches is:
    A. Needle in improperly
    B. Balance wheel loose
    C. Upper tension too tight
    D. Upper tension too loose
    E. Feed dropped
14. The problem which causes light weight man-made single knit to jam in the machine is:

A. Hole too large in face plate
B. Pressure too heavy
C. Hole too small in the face plate
D. Opening in pressure foot too loose
E. Needle too large

SEWING EQUIPMENT TASKS

NOTE: For items 15 through 18, the sewing machine is to be used. No hand stitching is necessary. If no sewing machine is available with the required attachments, omit Task I - III and complete task IV.

15. Task I
Three-step zig-zag (serpentine or variation of zig-zag) along the edge of the polyester twill fabric (provided).

16. Task II
Darn a hole in denim (4" x 4" provided).

17. Task III
Machine blind stitch a hem in the polyester double knit piece (4" x 6").

18. Task IV
Waist band - Assuming fabric 18 a. and 18. b represents a skirt band interfaced with pellon. Top stitch ½" from the folded edge the full length of the band.
ENCLOSURES:

Answer Sheet
Experience Form

Written items 1 through 28
(including folders 2)
(items 29 through 33)
Task (performance) V through VI
including folders 2 for items
34 through 35
5. CLOTHING CONSTRUCTION - LEVEL I

DIRECTIONS:

A. Read each question and all possible answers.
B. When you have decided which answer(s) is correct, blacken the corresponding space on the answer sheet with a pencil.
C. Some questions have one answer; others have more than one answer.
D. When you have completed the test, return the test and answer sheet to your teacher.

1. When fitting pattern pieces, pin:
   A. Or measure from seam line to seam line
   B. Or measure from cutting line to cutting line
   C. All darts and tucks and measure or pin from cutting line
   D. All darts and tucks and measure from seam line to seam line

2. Pattern envelopes marked for "knits only" allow:
   A. More ease than patterns for plain woven fabrics
   B. The same amount of ease as other patterns
   C. Less ease than patterns for plain woven fabrics
   D. Twice as much ease as patterns for plain woven fabric

3. When checking pants' patterns for fit, the two most important measurements are:
   A. The side seam and hips
   B. The waist and inseam
   C. The crotch and hips
   D. The waist and hips

4. Allowance for body movement in patterns is identified as:
   A. Movement
   B. Drape
   C. Ease
   D. Tolerance

CONTINUED ON PAGE 2
5. The yardage of plain woven fabric to be purchased to construct View B, size 10, Misses, 44/45 inches wide fabric is:

A. 3 7/8
B. 2 1/4
C. 2 1/8
D. 3 1/2
E. 2 1/2

<table>
<thead>
<tr>
<th>MISSES DRESS PATTERNS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>View A</strong></td>
</tr>
<tr>
<td>35&quot; wo nap</td>
</tr>
<tr>
<td>44/45&quot; wo nap</td>
</tr>
<tr>
<td>60&quot; wo nap</td>
</tr>
</tbody>
</table>

| **View B**            | 10    | 12    | 14    | 16    | 18    |
| 35" wo nap            | 3 1/2 | 3 5/8 | 3 5/8 | 4     | 4     |
| 44/45" wo nap         | 2 1/2 | 2 1/2 | 2 5/8 | 3 1/8 | 3 1/8 |
| 60" wo nap            | 2 1/8 | 2 1/8 | 2 1/8 | 2 1/4 | 2 3/8 |

CONTINUED ON PAGE 3
NOTE: Items 6 through 10 refer to DIAGRAM I.

6. On the pattern diagram identify the notch:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5

7. On the pattern diagram identify the dart:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5

8. On the pattern diagram identify place on fold:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5

9. On the pattern diagram identify the cutting line:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5
10. On the pattern diagram identify the straight of grain:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5

   NOTE: Items 11 through 14 refer to Fabric Diagram II

   ![Fabric Diagram II]

11. Using Diagram II, identify bias:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5

12. Using Diagram II, identify crosswise grain:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5

13. Using Diagram II, identify lengthwise grain:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5

14. Using Diagram II, identify selvage:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4
   E. Number 5
15. To lengthen a shirt less than 2 inches:
   A. Add to the lower edge of the pattern the required amount
   B. Slash above bust or chest line and insert needed length
   C. Slash pattern on any horizontal line and insert needed length

16. An alteration is not necessary if the bustline dart direction is:
   A. Below the point of the bust
   B. Above the point of the bust
   C. To the side of the point of the bust
   D. Toward the point of the bust

17. If less than 2” is needed in total width of a pattern, the additional amount without changing the design lines of the garment is added at:
   A. Side seams
   B. Center front
   C. Center back
   D. Lower edge of pattern
   E. Stretch the fabric

18. Fabric is prepared for construction by:
   A. Preshrinking by washing
   B. Preshrinking by dry cleaning
   C. Preshrinking by method on care tag
   D. Not preshrinking

19. In preparation for cutting the fabric, pattern pieces should be pinned at:
   A. Pattern grain line markings on the straight woven fabric
   B. Corners of pattern to fabric
   C. Sides of the pattern
   D. The notches of the pattern

20. The process used in transferring pattern markings to the fabric is determined primarily by:
   A. Fabric
   B. Alterations
   C. Pattern markings
   D. Guide sheet

21. After cutting and before removing pattern, the markings that should be transferred are:
   A. Straight of fabric
   B. Darts, tucks
   C. Hem lines
   D. Notches
22. Staystitching on the broken lines would be used in Diagram III:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4

23. Staystitching is used to:
   A. Mark stitching line
   B. Prevent curved or bias areas from stretching
   C. Decorate garment
   D. Baste pieces together

24. Darts are a basic part of a pattern because their primary purpose is to:
   A. Give shape to the fabric
   B. Serve as an indicative point of alteration
   C. Be decorative
   D. Change design

25. When joining a shoulder seam and the back is wider than the front, the extra fabric is:
   A. Cut away at armseycye
   B. Shorten by a tuck
   C. Eased in
   D. Cut away at shoulder
26. The placement of understitching is illustrated by a broken line in Diagram IV:
   A. Number 1
   B. Number 2
   C. Number 3
   D. Number 4

   **Diagram IV**

   1.  
   2.  
   3.  
   4.  

27. The purpose of grading a seam is to:
   A. Make it stronger
   B. Reduce bulk
   C. Make it weaker
   D. Add bulk

28. The appropriate stitch placement for attaching a hook is:
   A.  
   B.  
   C.  
   D.  
   E.  

   **Diagram V**

(Continued on page 8 see folder)
29. The appropriate seam edge finish for the fabric (see Sample I) and the garment (see Diagram IV)

A. Pink
B. Clean finish
C. Zig-Zag
D. Raw edge

(Continued on page 9 - see folder)
(Items 30 - 33 refer to Sample II.)

SAMPLE II

A.

B.

C.

D.

SAMPLE II

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30. From Sample II identify the **basting stitch**:

A.  
B.  
C.  
D.  

31. From Sample II identify the **whip or slanted stitch**:

A.  
B.  
C.  
D.  

32. From Sample II identify the **running stitch**:

A.  
B.  
C.  
D.  

33. From Sample II identify the **slip stitch**:

A.  
B.  
C.  
D.  

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**CLOTHING CONSTRUCTION - LEVEL I**

Performance Tasks V-VI

**Task V**

34. Clean finish raw edge, turn up and put in hem, 1" in width, by hand using either slip or whip stitch. (6" x 6" fabric piece and thread provided).

**Task Vi**

5. CLOTHING CONSTRUCTION - LEVEL II

ENCLOSURES:

Answer Sheet
Experience Form

Written items 1 through 19 including folders
(items 0 through 0)

Task (performance) VII through XIII including folders 4, for items
20 through 26
DIRECTIONS:
A. Read each question and all possible answers.
B. When you have decided which answer(s) is correct, blacken the corresponding space on the answer sheet with a pencil.
C. Some questions have one answer; others have more than one answer.
D. When you have completed the test, return the test and answer sheet to your teacher.

1. When using a plaid fabric, pattern pieces will be easier to match for:
   A. One seam gathered skirt
   B. Four gored, straight skirt
   C. Six gored, flared skirt
   D. Four gored, flared skirt

2. The most allowance for fitting ease would be provided in a (an):
   A. Unlined jacket
   B. Blouse
   C. Strapless bodice
   D. Sleeveless dress

3. A sleeve alteration requiring more than a seam line change is:
   A. Widening a straight cuff
   B. Adding to girth of upper sleeve
   C. Lowering elbow dart
   D. Changing elbow dart direction

4. For a pattern alteration of more than 2", locate the figure problem, then:
   A. Slash and true the pattern
   B. Add needed amount at seams
   C. Add needed amount at center
   D. Remove all ease, darts and tucks

5. To minimize differences in light reflection, the pattern layout for knits should be the same as:
   A. Napped
   B. Woven
   C. Either napped or woven
   D. Even checked woven

6. The most stability will be given to a shoulder seam by using:
   A. A second row of machine stitching in the seam line
   B. A second row of machine stitching between the seam line and raw edge
   C. Machine stitch tape into seam line
7. The purpose of backing or underlining is to:
   A. Add body to a garment
   B. Retain the shape in a garment
   C. Conceal hand stitching
   D. Prevent raveling in seams
   E. Maintain fashion line and style detail

8. Places on a garment that usually need an interfacing are:
   A. Cuffs
   B. Collars
   C. Neckline (no collar)

9. Backing or underlining should be:
   A. The same weight as the fabric to be used for the garment
   B. The same weight or lighter weight than the fabric to be used for the garment
   C. Heavier than the fabric to be used for the garment

10. Backing or underlining is constructed so that each piece is:
    A. Matching grainline
    B. Made separately
    C. Attached to fashion fabric and treated as one thickness
    D. Bias to the fashion fabric grainline

CONTINUED ON PAGE 3
11. Using Diagram I, the most appropriate layout for a napped fabric is:

A.  
B.  
C.  
D.  

**DIAGRAM I**

A.  

B.  

C.  

D.  

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12. The major portion of ease for the set-in sleeve should be:
   A. Over the sleeve cap
   B. Below the sleeve cap
   C. Only on the back of the sleeve cap
   D. Only on the front of the sleeve cap

13. The procedure for putting in a curved hem is to:
   A. Ease with basting stitch
   B. Make small pleats or tucks
   C. Cut away excess fabric
   D. Cut wedges in the allowance

14. When pressing a pile fabric use:
   A. A needleboard
   B. A back and forth motion
   C. Steam and correct temperature
   D. A hot dry iron

15. For a printed woven fabric the appropriate method of transferring pattern markings is:
   A. Tracing wheel and paper
   B. Chalk
   C. Pins
   D. Tape

16. For a lace fabric the appropriate method of transferring pattern markings is:
   A. Tracing wheel and paper
   B. Chalk
   C. Pins
   D. Tailor's tacks
   E. Tape

17. For a knit fabric the appropriate method of transferring pattern markings is:
   A. Tracing wheel and paper
   B. Chalk
   C. Pins
   D. Tailor's tacks
   E. Tape
18. The best pattern layout for a plaid fabric is: (see Diagram II)

A. 
B. 
C. 

Diagram II
19. The best seam to use for the pants when using denim is: (see Diagram III)

A. Flat fell
B. French
C. Plain
D. Edge stitched

DIAGRAM III
20. Task VII
Put in a one inch hem on two sides of the 6" x 6" fabric sample and hand sew, one with a catch stitch and the other with a blind stitch. (Fabric and thread provided)

The fabric provided in this folder should be used for all three of the following processes. (Fabric 24" x 24")

Task VIII


Task IX

22. Cut two back skirt pieces using the provided skirt pattern. Insert a lap zipper into the center back seam.

Task X

23. Make a hand or machine buttonhole.

Task XI

24. Using the fabric provided make a flat-fell or French seam. (8" x 8" fabric)

Task XII

25. Make a tailor's tack on large dot. (Fabric provided - two 3" x 3" squares)

Task XIII

26. Using the fabric provided, sew a larger outer curve onto a smaller inner curve and do whatever is necessary to make the seam lie flat. (Two shaped 6" x 8" fabric pieces).
ENCLOSURES:

Answer Sheet

Experience Form

Written items 1 through 6
including folders 1

(items 7 through 11)

Task (performance) 0 through 0
including folders 0 through 0
A. Read each question and all possible answers.
B. When you have decided which answer(s) is correct, blacken the corresponding space on the answer sheet with a pencil.
C. Some questions have one correct answer; others have more than one answer.
D. When you have completed the test, return the test and answer sheet to your teacher.

1. "Machine wash only" on a care label means that the garment can be:
   A. Dry cleaned
   B. Machine washed
   C. Hand washed
   D. Bleached

2. "Press or iron with cool iron" refers to:
   A. Lowest setting
   B. Medium setting
   C. Highest setting
   D. Steam

3. Leaving a garment in the dryer beyond the drying cycle will:
   A. Decrease wrinkling
   B. Increase wrinkling
   C. Make no difference

4. Fabric softeners should:
   A. Increase static electricity
   B. Decrease static electricity
   C. Have no effects on the fabric

5. Stains need special treatment:
   A. Before washing
   B. Immediately after washing
   C. During drying

6. Chlorine bleaching is more effective when used with:
   A. Water and no detergent
   B. Water and detergent
   C. Water and fabric softener

Continued on page 2 - (see folder)
Sarah Jane

Care:

- Do not use chlorine bleach
- Do not twist or wring
- Hand wash, line dry
- Press with warm iron

Sarah Jane

A "Supersach" garment

90% Polyester - 10% Cotton
Permanent Press
Shrinkage less than 2%

U.S. Pushkind Co.

Diagram I
NOTE: Items 7 through 11 refer to Diagram I on the left.

7. The water temperature(s) for washing the garment should be:
   A. Hot
   B. Warm
   C. Cold

8. If the garment is machine washed and becomes permanently wrinkled, the:
   A. Store should replace the garment
   B. Manufacturer should replace the garment
   C. Money should be refunded
   D. Guarantee is void
   E. Care label doesn't cover this

9. If the garment faded as a result of direct sunlight, the:
   A. Store should replace the garment
   B. Manufacturer should replace the garment
   C. Money should be refunded
   D. Guarantee is void
   E. Care label doesn't cover this

10. If the fabric melted or stuck to a warm iron the:
    A. Store should replace the garment
    B. Manufacturer should replace the garment
    C. Money should be refunded
    D. Guarantee is void
    E. Care label doesn't cover this

11. A garment is worn in a heavy rain, and shrinks about 3" on sleeves and at hemline. This should not be expected as the garment has:
    A. 10% cotton content
    B. Permanent press finish
    C. A guarantee against shrinkage