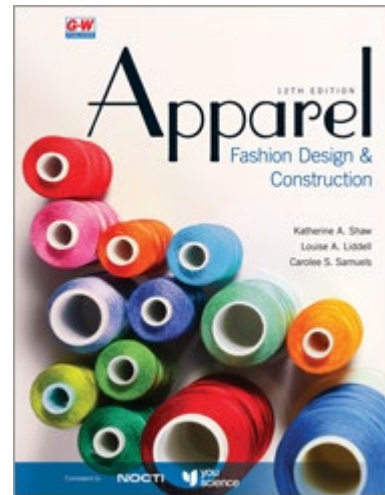


Correlation of
Apparel: Fashion Design & Construction, Katherine Shaw, Louise Liddell, and Carolee Samuels
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to
Precision Exams by YouScience

Goodheart-Willcox is pleased to partner with Precision Exams by YouScience by correlating *Apparel: Fashion Design & Construction* to their standards for Sewing Construction & Textiles II. Precision Exams standards and Career Skills Exams were created in concert with industry and subject matter experts to match real-world job skills and marketplace demands. Students that pass the exam and performance portion of the exam can earn a Career Skills Certification.

The correlation chart below lists the standards, objectives, and indicators for the Sewing Construction & Textiles II exam in the left column. Corresponding content from *Apparel: Fashion Design & Construction* that can be used by a student to help achieve the standard, objective, or indicator is listed in the right column.

For more information on Precision Exams by YouScience, including a complete listing of their 150+ Career Skills Exams and Certificates, please visit <https://www.youscience.com/certifications/career-clusters/>.

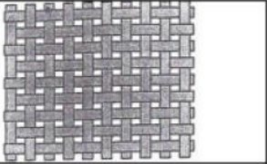
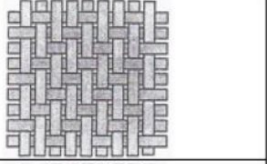
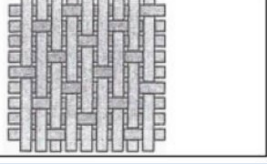
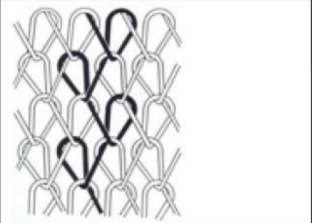



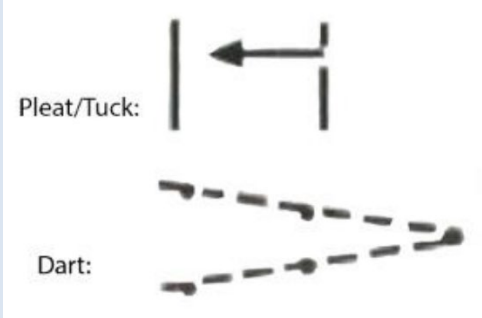
Standards / Objectives / Indicators	Textbook Pages
Standard 1: Students will review basic sewing knowledge.	
Objective 1: Review sewing tools knowledge and machine functions (refer to Sewing Construction & Textiles I). Sewing machine use and maintenance.	228-245, 239-245
Indicator 1: Tools and equipment	228-245
Indicator 2: Pre-construction a. Reading a pattern. b. Layout.	211- 227, 325-326
Indicator 3: Fibers	148-161
Indicator 4: Basic construction techniques	263-311

Standards / Objectives / Indicators	Textbook Pages
Standard 2: Develop machine knowledge and skills.	
Objective 1: Sewing machine	239-245
Indicator 1: Identify various specialty presser feet. a. All-purpose foot, buttonhole foot, zipper foot, blind hem foot, rolled hem foot.	239-241, 276-277, 284, 286
Indicator 2: Identify specialty needles. a. Heavy duty needle. b. Double needle. c. Microtech Needle.	232-233, 306
Indicator 3: Identify specialty threads.	234-235
a. Quilting: a strong cotton thread with a waxy coating to prevent tangling when used in hand-quilting. It is not appropriate for use in sewing machine.	235
b. Heavy duty: Slightly heavier than all-purpose thread; to be used for prominent topstitching.	235
c. Embroidery: Decorative thread offered in a wide variety of vibrant colors. Silky, lustrous, and versatile, it is weaker than regular sewing thread and should not be used for construction. It is used for decorative stitches.	186-188, 235
d. Metallic: Add glitter and they are durable. All-purpose thread should be used on the bobbin; use metallic in upper looper on a serger.	235
e. Elastic: Used for stretching shirring; usually wound by hand onto the bobbin. The bobbin tension must be adjusted when using this type of thread.	--
f. Serger: lighter weight than all-purpose sewing machine thread.	319-320
Indicator 4: Identify specialty stitches. a. Stretch stitch: used for sewing on knits or other times when you need the stitching to be able to stretch. b. Blind hem: used to sew a blind hem, edge stitch, or stitch in the ditch. c. Buttonhole stitch: series of stitches used to create a buttonhole.	241, 274, 284, 286, 306
Objective 2: Operate, thread, and maintain a serger.	228-245
Indicator 1: Identify the needle stitch plate, feed dogs/system, presser foot, thread tensions, presser foot lever/lifter, handwheel, stitch length control, knives and loopers (overcast on the serger).	315-316
Indicator 2: Thread, operate, and care for serger according to machine manual (e.g., clean, oil).	320-333
Indicator 3: Creates two types of stitches a. needles and looper work together to create a straight and flatlock stitches.	318-319
Objective 3: Use pressing tools to create a professional product.	238-239, 288-289
Indicator 1: Incorporate the practice of “press as you sew.”	288-289

Standards / Objectives / Indicators	Textbook Pages
<p>Indicator 2: Use pressing equipment.</p> <ul style="list-style-type: none"> a. Tailor’s ham: for pressing curved areas of clothing (darts, shoulders, collars, etc.) b. Sleeve board: narrow board for sleeves c. Seam roll: oblong for long, product like sleeves d. Point presser: for narrow, hard-to-reach areas of collars, belts, cuffs, corners and points e. Pressing cloth: prevents scorching/melting of fabric 	238-239, 288-289, 407, 410, 417-418
<p>Indicator 3: Identify and use appropriate temperature settings for various fabrics with different fiber content. (In order of MOST Heat to LEAST Heat).</p> <ul style="list-style-type: none"> a. Linen (MOST Heat) b. Cotton c. Rayon/Viscose d. Wool e. Polyester f. Silk g. Acetate h. Acrylic i. Spandex j. Nylon (LEAST Heat) 	158, 166-167, 170-171, 288-289, 357, 407-408, 410, 417-418
Standard 3: Students will distinguish the different types of fabric and fiber characteristics.	
Objective 1. Identify and review basic fibers.	148-161
Indicator 1: Natural fiber characteristics comes from plant and animals, moisture absorbent, more expensive.	47, 62-64, 78, 87-88, 95, 148-161, 357-359, 378, 435,
<p>Indicator 2: Cotton: Plant source</p> <ul style="list-style-type: none"> a. Pros - absorbent, comfortable, durable, easy to launder, stronger wet than dry. b. Cons - wrinkles, shrinks, mildews. 	151-152
<p>Indicator 3: Linen: plant source (flax)</p> <ul style="list-style-type: none"> a. Pros - absorbent, natural luster, quick drying. b. Cons - wrinkles, frays, little stretch, mildew. 	152-154
<p>Indicator 4: Silk: animal source (silkworm cocoon),</p> <ul style="list-style-type: none"> a. Pros - absorbent, natural luster, insulating, strong, resilient. b. Cons - degrades and yellows from age and sunlight weaker wet than dry, water marks. 	49, 156-157
<p>Indicator 5: Wool: animal source (fur)</p> <ul style="list-style-type: none"> a. Pros - absorbent, strong, elastic, flame resistant, wrinkle resistant. b. Cons - shrinks when laundered improperly, bleaches with sunlight, damaged by moths. 	154-156

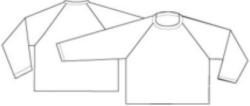

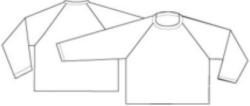

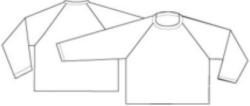

Standards / Objectives / Indicators	Textbook Pages
Objective 2: Identify manufactured fibers (i.e., nylon, polyester, bamboo, rayon, spandex) and their characteristics.	162-173
Indicator 1: General characteristics: made from chemical processes (some made from natural elements mixed with chemicals while other are made completely from non-natural substances)	162-173
<ul style="list-style-type: none"> a. Nylon: Chemical sources. <ul style="list-style-type: none"> i. Pros - strong, water repellent, colorfast, abrasion resistant. ii. Cons - frays easily, non-recyclable. 	55, 167
<ul style="list-style-type: none"> b. Polyester: Chemical source. <ul style="list-style-type: none"> i. Pros - good shape retention, easy to launder, wrinkle resistant, colorfast, blends well with other fibers. ii. Cons - retains oily stains, pills, builds static. 	55, 167-168
<ul style="list-style-type: none"> c. Rayon: Cellulose source. <ul style="list-style-type: none"> i. Pros - soft and comfortable, drapes well, blends well with other fibers, dyes well. ii. Cons - shrinks, poor shape retention, wrinkles. Dry clean only. 	55, 165-166
<ul style="list-style-type: none"> d. Spandex: Chemical source. <ul style="list-style-type: none"> i. Pros - very elastic, adds stretch when blended with other fibers, resistant to oils and outdoor elements. (sun, sea and sand) ii. Cons - shrinks, damaged by heat, can be difficult to sew. 	55, 169
<ul style="list-style-type: none"> e. Bamboo: Cellulose source. <ul style="list-style-type: none"> i. Pros - soft, strong, water absorbent, renewable. ii. Cons - wrinkles, takes longer to dry and yellow with time. 	165-166
Objective 3: Identify various types of fabric construction.	175-185
Indicator 1: Classify basic weaves. <ul style="list-style-type: none"> a. Plain: yarns interlace at right angles, passing alternately over and under each other; soft, durable, easy to sew, wrinkles easily. b. Twill: one yarn passes over two or more yarns to create a diagonal pattern; strong, wrinkle resistant, hides soil. c. Satin: yarns float over four or more yarns, then pass under one; shiny, smooth surface, snags easily 	179-180
Indicator 2: Classify basic knits. <ul style="list-style-type: none"> a. Warp: Yarns move upward in a zigzag fashion b. Weft: Yarns move horizontally. 	181-183
Indicator 3: Classify non-woven fabrics (i.e. felt and bonded).	184-185

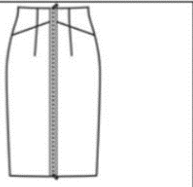
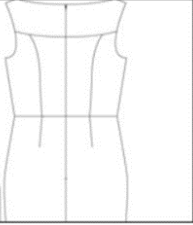
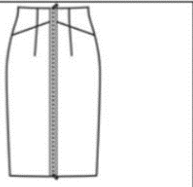
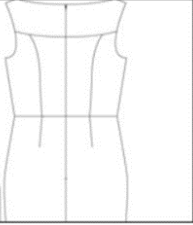
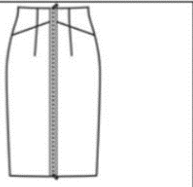
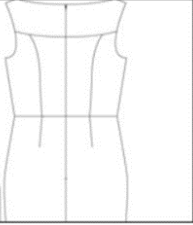
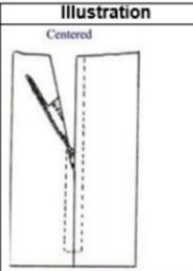
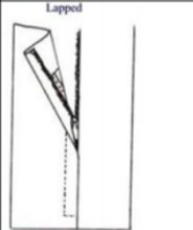
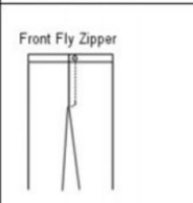
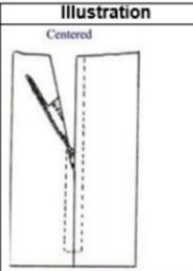
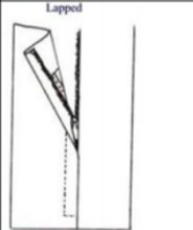
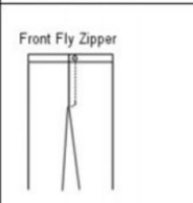
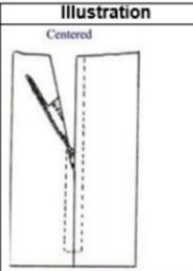
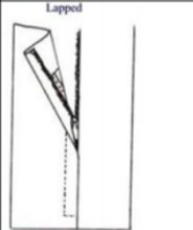
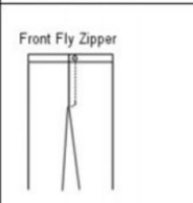
Standards / Objectives / Indicators		Textbook Pages
Plain		179-180
Twill		
Satin		
Warp		181-183
Weft		
Objective 4: Identify specific fabrics.		172-193
1. Denim: twill weave made of single hard-twisted yarns with colored warp and white or undyed fill.		192
2. Flannel: woven fabric made of cotton where the surface has been slightly brushed created a soft-napped fabric.		192
3. Canvas: extremely durable plain-woven fabric.		154
4. Calico: a plain-weave cotton cloth printed with small-scale design.		192
5. Corduroy: piled, vertical rib design; napped fabric that comes in varying weights; often identified by the width of the ribs or wales.		192
6. Satin: recognized by its smooth, lustrous surface and woven with long, floating yarns in the warp; silk, polyester, acetate, and rayon are common fabrications.		193
7. Rib knit: double knit fabric where the rib wales alternate on the face and back of the fabric.		183
8. Jersey knit: any knitted fabric without distinct ribs; can be lightweight to heavy, and made in a variety of fibers, wool, cotton, silk, nylon, or blends.		182

Standards / Objectives / Indicators	Textbook Pages
9. Fleece: soft napped insulating fabric often made from polyester or recycled plastics.	168, 307
10. Sweatshirt fleece: type of jersey fabric with plain knit stitches on the front and fleece on the back.	183
Standard 4: Students will demonstrate pre-construction techniques at the intermediate level.	
Objective 1: Students will independently take measurements, determine pattern size and make pattern alterations.	212-216, 344,
<p>Indicator 1: Determine pattern size based on body measurements and finished garment measurements. Look at finished garment measurements on pattern envelope and pattern pieces, then compare to body measurements to choose a good fit.</p> <ul style="list-style-type: none"> a. Natural waist, bust/chest, high bust, full hip, neck, sleeve length. b. Back-waist measurement, from prominent bone at base of neck to waist. 	212-215, 344
<p>Indicator 2: Review relationship between body measurements and pattern measurements and the use of ease.</p> <ul style="list-style-type: none"> a. Wearing ease: amount added to a person’s body measurements so one can move in a garment. b. Design ease: any amount of ease beyond the basic wearing ease that creates the style of a garment. c. Layering ease: amount of ease added to clothing that will be worn over other clothing. d. Negative ease: will measure smaller than actual body measurements but will stretch to fit comfortably. 	216-217, 344
Objective 2 Apply pattern preparation techniques.	220-222, 248-261
<p>Indicator 1: Review basic pattern symbols (e.g., straight of grain arrows, notches, pattern markings, buttons and buttonholes, place on fold line, sizing lines, adjustment lines).</p>	220-222
<p>Indicator 2: Identify pattern symbols (e.g., pleat, dart, finished garment measurements, center front or back).</p>  <p>The diagram illustrates two types of pattern symbols. The top part, labeled 'Pleat/Tuck', shows a vertical line with a horizontal arrow pointing to the left, indicating a fold. The bottom part, labeled 'Dart', shows two dashed lines that converge to a point, representing a dart used to shape fabric to a body.</p>	220-222
<p>Indicator 3: Finished garment measurements: measurements of the garment after it is completed.</p>	215-218
<p>Indicator 4: Center front and back: where the center of the garment front or back is located.</p>	221-222, 253-256

Standards / Objectives / Indicators	Textbook Pages
Indicator 5: Review pattern placement and layout on fabric. (i.e., straight of grain is always parallel to the selvage; place on fold should be placed directly on the fold of the fabric; allows the garment to hang straight)	219-222, 253-256
a. Review one-way directional/nap layout. (i.e., all pattern pieces must face the same direction; tops of the pattern pieces should be at the top of the direction of the design or nap)	225, 253-256, 306-307
Objective 3: Student will use appropriate marking techniques.	256-261
STANDARD 5: Students will use correct sewing construction techniques at the intermediate level.	
Objective 1: Students will use correct sewing construction techniques at the intermediate level.	263-311
Indicator 1: Identify and demonstrate stitching techniques and their applications.	264-266, 317-319
Indicator 2: Baste stitch: lengthened stitch used for ease stitching, gathering and temporary stitching.	265-266, 326
Indicator 3: Blind Hem: The finished edge on the bottom of a garment sewn so that the stitching is invisible.	284
Indicator 4: Dart: The goal is to sew a dart with a point that is as smooth as possible. Stitch from the wide end to the tip, do not back stitch at the point to secure, leave long threads and tie.	267-268
Indicator 5: Ease stitching: There are three ways to ease a seam: (1) gather before sewing the seam, (2) stretch the shorter seam as you sew the unequal layers together, or (3) let the machine ease the longer edge as the layers move under the presser foot.	266
Indicator 6: Gather: Tiny, soft folds of fabric that form when a larger piece of fabric is sewn to smaller piece. The fabric should determine the best method of gathering to use. The goal is to create small, evenly spaced folds of fabric along the gathered area. There are four basic ways to gather: (1) rows of basting stitches, (2) machine couch a cord, (3) use a ruler attachment or gathering foot, and (4) zigzag over clear elastic.	266-267
Indicator 7: Pleat: All pleats involve folding fabric, and each folding strategy produces a different type of pleat. (e.g., knife pleat, box pleat, inverted pleat)	267-268
Indicator 8: Stay stitching: A row of permanent, straight stitches sewn on a single layer to prevent stretching in key areas when you're handling the garment during the construction process. The stitching should be done just inside the seam allowance (1/2" from the cut edge if seam allowances are 5/8"). No back stitch is necessary.	265
Indicator 9: Stitch-in-the-ditch: Refers to machine stitching that is sewn in the "ditch" of a seam so that it sinks into the seam and stays out of sight.	274

Standards / Objectives / Indicators	Textbook Pages
<p>Indicator 10: Topstitching: A row of evenly spaced straight stitches visible on the right side of a garment; usually aligned parallel to an edge or a seam. Typical distance is 1/4" to 3/8"; however, it usually is a matter of taste.</p>	120, 268
<p>Indicator 11: Tuck: A stitched fold of fabric that is usually decorative but can also be used to add shape to a garment; formed so that the fold and stitching show on the right side of the fabric.</p>	120, 266,
<p>Indicator 12: Understitching: A technique when seam allowances are sewn to a fabric layer to help keep the fabric from rolling to the right side of the garment; invisible from the right side of the garment. Grade and clip seam allowances before understitching. Press seam allowances toward the facing.</p>	274
<p>Objective 2: Practice correct application techniques for applying interfacing and attaching facings or collars.</p>	238, 274-275, 294-295, 300-301
<p>Indicator 1: Interfacing can fulfill the following functions:</p> <ol style="list-style-type: none"> reinforce edges, such as hems and front openings. provide added body. create stability in buttonholes. prevent stretch in areas like a waistband or upper back. build shape in facings, lapels and collars. provide a crisp finish in areas such as pockets. 	274-275,
<p>Indicator 2: Select and apply appropriate interfacing (fusible, non-fusible).</p> <ol style="list-style-type: none"> Sew-in/non-fusible interfacing must be anchored to the garment with stitches, either sewn into a seam or sewn onto a layer of fabric before being sewn into the garment. To apply, sew the interfacing to the wrong side of fabric within the seam allowance. Fusible interfacing is attached to the fashion fabric with glue activated by heat from the iron. To apply non-fusible, use heat, moisture and a press cloth. Follow the manufacturer's instructions. Choose between sew-in/non-fusible and fusible based on the project fabric, the garment's requirement and preference. 	238, 274-275,
<p>Indicator 3: Demonstrate techniques associated with attaching facings or collars.</p> <ol style="list-style-type: none"> Facings used to finish edges at necklines, armholes, front and back openings, hems, vents, and slits. Facings add support, prevent the edge from stretching and ensure a flat, crisp outer edge. 	294-295
<p>Indicator 4: Three types of collars:</p> <ol style="list-style-type: none"> Flat: falling or lying flat on the shoulders (i.e. Golf shirt, Sailor Collar) Rolled: Stands up and falls on the neck (i.e. Dress shirt, Turtleneck) Standing: Stands up against neck (i.e. Mandarin, Banded) 	294
<p>Objective 3: Identify each of the following sleeves:</p>	295-297

Standards / Objectives / Indicators	Textbook Pages						
<p>Indicator 1: Raglan sleeves: (two-piece and one-piece) join the bodice in a diagonal seam that extends from the neckline to the side seam.</p>	30-31, 295-296						
<p>Indicator 2: Set-in sleeves: Joined to the garment bodice at a seam that circles over the shoulder and under the arm. A well-made set-in sleeve meets at the shoulder in a puckerfree, smooth, curved seam.</p>	295-297						
<p>Indicator 3: Two methods of construction: closed/round method and open/flat method.</p>	295-297						
<table border="1" data-bbox="212 575 570 940"> <thead> <tr> <th data-bbox="212 575 289 617">Sleeve Style</th> <th data-bbox="289 575 570 617">Illustration</th> </tr> </thead> <tbody> <tr> <td data-bbox="212 617 289 743">Raglan</td> <td data-bbox="289 617 570 743">  </td> </tr> <tr> <td data-bbox="212 743 289 940">Set-in</td> <td data-bbox="289 743 570 940">  </td> </tr> </tbody> </table>	Sleeve Style	Illustration	Raglan		Set-in		295-297
Sleeve Style	Illustration						
Raglan							
Set-in							
<p>Objective 4: Identify each of the following zipper applications and construct one or more.</p>	276-280						
<p>Indicator 1: Centered zippers are found on a variety of garments, including dresses, skirts and pants. Centered zippers align the seam over the zipper teeth and the zipper tape is covered by symmetrical overlaps on each side. Parallel lines of topstitching flank the seam.</p>	276-277						
<p>Indicator 2: Lapped zippers are sewn to completely hide the zipper under a flap of fabric, and are found in skirts, pants, and center backs of dresses.</p>	277-280						
<p>Indicator 3: Fly zippers are used in pants. Women’s garments lap right over left, and men’s garments lap left over right.</p>	279-280						
<p>Indicator 4: Exposed zippers are sewn directly on the outside of the garment. The zipper tape becomes a decorative feature. When installing an exposed zipper, turn the seam allowances to the right side, topstitch the zipper over the seam allowance to cover the fabric edge.</p>	235-236						
<p>Indicator 5: Invisible zippers, when inserted correctly, are unnoticeable except for the zipper pull. They are incredibly flexible and soft, making them ideal for fine fabrics.</p>	280						

Standards / Objectives / Indicators		Textbook Pages								
<table border="1"> <tr> <td>Exposed</td> <td></td> </tr> <tr> <td>Invisible</td> <td></td> </tr> </table>	Exposed		Invisible			276-280				
Exposed										
Invisible										
<table border="1"> <thead> <tr> <th>Zipper Type</th> <th>Illustration</th> </tr> </thead> <tbody> <tr> <td>Centered</td> <td></td> </tr> <tr> <td>Lapped</td> <td></td> </tr> <tr> <td>Fly</td> <td></td> </tr> </tbody> </table>	Zipper Type	Illustration	Centered		Lapped		Fly			276-280
Zipper Type	Illustration									
Centered										
Lapped										
Fly										
Objective 5: Identify types and complete correct application of hems.		280-284								
Indicator 1: Identify steps of hem preparation (i.e., appropriate length and width, reduce bulk, ease, pressing).		280-281								
Indicator 2: Apply correct edge finishes (e.g., clean finished, zigzag, serged).		282, 319, 328								
Indicator 3: Complete one or more of the following hemming techniques: hand stitched hems, double fold hem, machine blind hem, rolled hem.		283-284, 319								
Standard 5. Students will develop professional and interpersonal skills needed for success in the fashion industry.										
Objective 1: Determine the difference between hard skills and soft skills.		444-445,								

Correlation of *Apparel: Fashion Design & Construction* to Precision Exams by YouScience Sewing Construction & Textiles II—page 11

Standards / Objectives / Indicators	Textbook Pages
Indicator 1: Hard Skills: Hard skills are specific, teachable abilities that can be defined and measured.	60-73, 104-108, 262–291, 292–311, 444-445,
Indicator 2: Soft Skills: Personal attributes that enable someone to interact effectively and harmoniously with other people.	444-445, 469-470
Objective 2: Identify soft skills needed in the workplace.	61-75, 442-445, 448, 456-457, 464-479, 481-485, 487-489, 491, 492
Indicator 1: Professionalism	464-466, 469-470, 476,
Indicator 2: Respect Legal requirements/expectations	84-85, 88-89
Indicator 3: Good communication skills	469-472, 473-474
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