6/97 = 4H 92116C → 6/98 = 4H 92116

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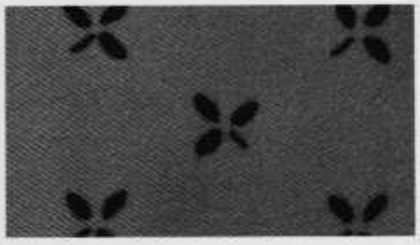
Analyzing the Color, Design, and Texture of Fabric

What attracts you to an item of clothing or fabric? The *color, design, visual texture,* and *hand* (or reaction to the touch of fabrics) are most likely to appeal to you and induce you to buy. These aesthetic or artistic values also influence how you feel about your clothing and yourself. While aesthetic values are personal, learning to analyze fabrics for their color, design, and texture will help you select clothing or coordinate patterns and fabrics. Aesthetic awareness and sensitivity can be developed or improved by analyzing fabrics for their aesthetic qualities.

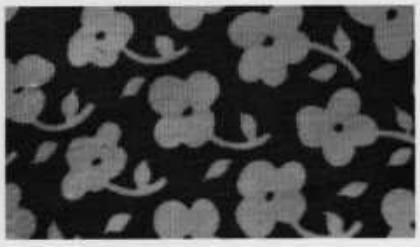
Color

Begin by looking at a fabric and thinking about the color qualities which attract you to it. Color has an emotional effect on people. We associate color with moods, including "feeling blue" or being "in the pink." Numerous studies identify the effects of color on people's reactions. Personal reactions to color are a result of social and cultural background, economic levels, and environmental influences. Color can attract, repel, advance, recede, stimulate, or quiet. Color affects one's feelings about personal appearance and well-being and also affects other persons' impressions and acceptance of us.

Learning to analyze color will help you select clothing and fabric that works the way you want. There are many ways of describing color in clothing and fabric. Try to determine the predominant color of a fabric. This is easy if the fabric is a solid color, but more difficult when several colors are used in a pattern or design. Even after you identify the color or colors of a fabric those colors may change. The source of light can affect the appearance of a color. Natural light varies during the day, and artificial lights come in different color tones. If possible, look at a fabric under the type of light where it will be used.



Dominant color in background



Pattern, background nearly equal

Pattern mixture of several colors

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EC 946
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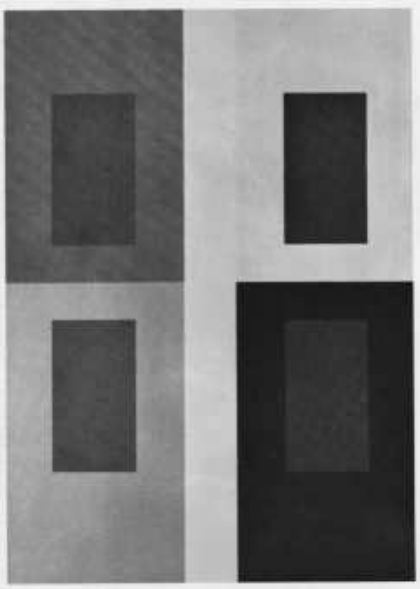
Light to dark gray scale

Colors relate to and interact with each other. The background or an adjacent area can make a color appear darker or lighter, brighter or grayer. The distance you are from a fabric can influence the color you see. Fabrics with small all-over designs, tiny stripes or checks, or tweeds may appear very different close up compared to a distance. Select linings, notions, and accessories for these fabrics by looking at the color harmony both close up and at a distance.

After determining the predominant color and any additional colors in a fabric, try to describe each color in basic terms such as red, red-orange, orange, yellow-orange, yellow, yellow-green, green, blue-green, blue, blue-violet, violet, or red-violet. These colors or hues are found in the rainbow or on a color wheel and are the basis for various color systems. True colors from a color wheel lack the red-blue or orange-yellow undertones that make fashion colors wearable and flattering to personal coloring.

Next consider whether the basic color has been changed by making it lighter or darker from the basic color. Then consider whether the color has been changed by making it brighter or grayer and duller. Fashion names such as raspberry, lime, or toast are used to sell certain colors. These names are effective only if you associate the color with the term being used. For more accurate descriptions of a color, use terms such as grayed, light yellow-orange in place of a fashion name such as honey.



Color influenced by surrounding color

While rules for using color are outdated, there are known visual illusions created by color you may wish to consider. In general, warm colors such as red, orange, and yellow are considered advancing, stimulating, and exciting. They make objects or shapes appear larger or more important. Cool colors such as blue, green, and violet are considered receding, quieting, and reserved. These colors make shapes and areas appear smaller and less important.

When any color is darkened or grayed, however, the area appears smaller and less well defined than when the color is lightened or brightened. If a color is a favorite, but not flattering to you, try wearing it in a small amount, such as an accessory, or wearing a variation of it. To decide whether a color is flattering to you, hold the garment or fabric in front of yourself as you look at a full length mirror. Consider how flattering the color is with your skin, hair, eyes, and figure.

It may not be easy to determine your personal coloring because you do not fit easily into a category. The following information may help determine your coloring.

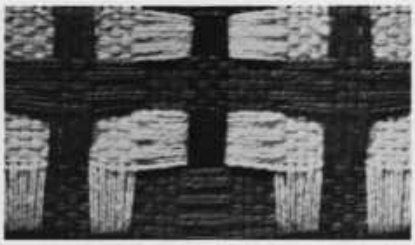
- If your skin has undertones of rose-pink or brown with a reddish hue and your hair has blue undertones (such as platinum or ash blond, auburn red, and jet black or snow-white), your personal coloring is considered cool. Cool colors or colors with red or blue undertones will be easiest to wear.
- If your skin has undertones of peachy-pink or yellow to golden and your hair has golden undertones (such as honey or strawberry blond, rust red, brown or brownish black, or creamy white), your personal coloring is considered warm. Warm colors or colors with orange or yellow undertones will be the easiest to wear.

Look for the undertones that are flattering to your coloring and avoid those which drain color from your skin or make it appear too ruddy or sallow.

Now analyze the color of fabric from a textile design viewpoint. Color effects may be the result of applying color to the fiber, to the yarn, or to the fabric. Frequently it is not possible for the consumer to determine how the color is added, however, colorfastness is affected by the application during manufacture.

Heather dyed yarn in knit fabric

Usually color that is applied to the fiber or the yarn is considered to be the most durable and long lasting. However, with modern dyes and pigments fabric that is dyed or printed usually performs satisfactorily if used for the purpose it was manufactured. Examples of design that result from applying color to the fiber or yarn include most solid color fabircs, heathers, (vari-colored effects with a blend of light to dark shades), and woven-in or knit-in patterns. Prints are applied to the fabric after it is woven or knit and are distinguished by the color strength and sharpness on the right side of the fabric.



Woven-in pattern

Knit-In pattern

Geometric print does not follow crosswise yarn direction

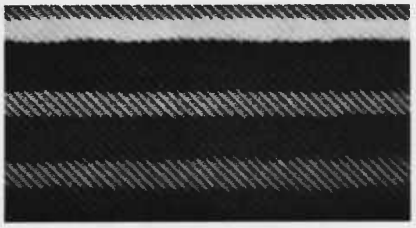
In checking the quality of fabric color at the time of purchase, look to see that the color is even. There should be no streaks or spots to indicate uneven dyeing. Check that the creaseline, fold, or shoulder area over a hanger is the same color as the rest of the fabric. A lighter color in this area indicates a poor quality dye that will rub off or fade easily. Geometric or symetrical prints should follow the lengthwise or crosswise yarn direction. If the print is not placed on the fabric correctly, it cannot be matched or lined up when constructed without distorting the fabric and the hang of the garment. In garments, long seams should hang straight in addition to having the design or print match.

Larger motif

Smaller motif

Design

A textile design should look as effective when seamed, darted, gathered, and draped around the body as it does when viewed as a flat piece of fabric. The more contrast in the design and the larger and bolder the motifs, the more difficult it is to use the fabric to advantage. Softer outlines and smaller motifs are less frustrating to sew and are more effectively used in relation to the body.



Printed geometric motif

The motifs or units of a textile design may be classified as *geometric, realistic, stylized,* and *abstract.* Geometric motifs such as stripes and plaids may be created during the weaving or knitting fabric construction process. If motifs are applied as prints after the fabric is constructed, be sure they are straight with the yarns of the fabric or the finished garment will be unsatisfactory. Geometric designs lead the eye. This may not be to your advantage if you are trying to conceal a figure irregularity. A high shoulder or an uneven waistline will be more obvious if the geometric design is not the same across the garment. A distinctively geometric design may dictate the garment styling and limit the possibilities for using the fabric. Geometric designs may require additional fabric in order to match the motifs during the layout and construction.

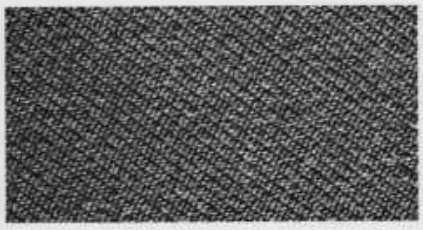
Realistic motif

Realistic motifs are imitations or repeats of natural or man-made objects. Stylized motifs are simplified variations of natural or man-made objects that are no longer recognizable. Abstract motifs are combinations of color, size, and shape without relationship to natural or man-made objects. Realistic, stylized, and abstract motifs may be easier or more difficult to use depending on the size of the motif, the contrast between the motif and the background, and whether or not the design is multiple-direction or one-way. Smaller size motifs, softened shadings, and multiple-direction designs are easier to sew and wear.

Stylized motif

Abstract motif

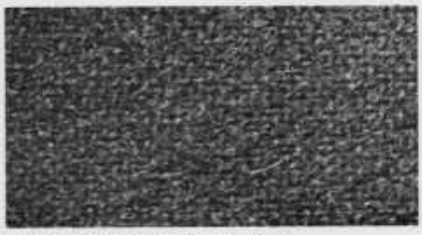
Warm texture, heavy weight



Crisp texture, medium weight

Transparent texture, sheer weight

Fuzzy thick texture, heavy weight



Rough texture. medium weight

Shiny texture, medium weight

Texture: visual and hand

Another aspect of textile design is texture, which includes the visual surface appearance and the feel of fabrics. The sensation from touching, holding, or squeezing fabrics is referred to as "hand." Terms that describe texture overlap between the visual surface appearance and the hand include: clingy-rigid, cold-warm, crisp-limp, dry-moist, firm-flexible, heavy-light, opaque-transparent, pliable-stiff, rough-smooth, shiny-dull, stretchy-stable, and thick-thin.

The texture of a fabric is also determined by the fiber, yarn, structure (weave, knit, etc.), and finish. Fibers are the smallest components of a fabric, but their characteristics strongly influence texture. For example, wool usually gives soft textures while linen gives crisp textures. Short lengths of staple fiber or long continuous filament fibers are twisted to form yarns. The type of fiber, the method of joining the fibers into yarn, and the amount of yarn twist can be varied to produce different textures of yarn.

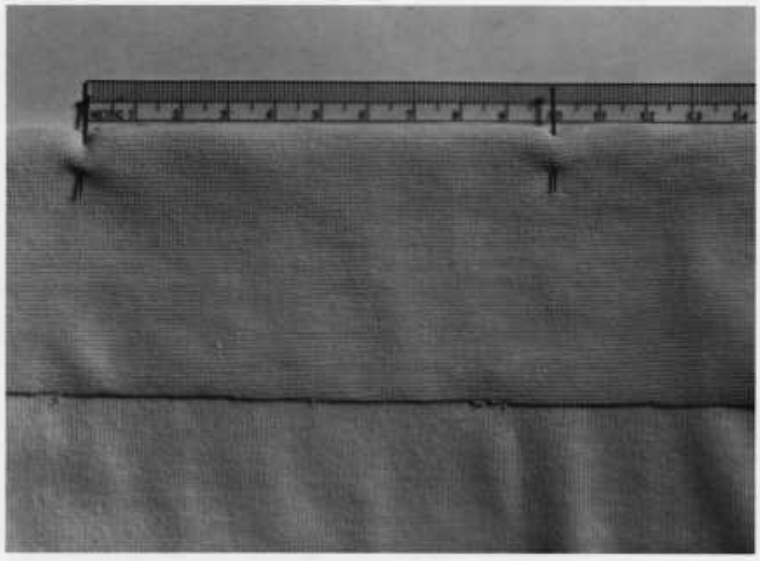
Fabric structure may be woven (one set of yarns inserted at right angles to another set that is held taut), knit (a series of interlocking loop stitches), non-woven (a web of man-made fibers held together by a resin, heat and pressure, or needle punching), or other construction such as felt or lace. The way the yarns are combined into the fabric structure determines aspects of texture such as the weight, flexibility, firmness or compressibility, and stability or stretchiness characteristics of the fabric. The looseness or tightness of yarn twist, the size of the yarn, and the closeness or openness of the fabric structure influence the durability of different textures. The most durable fabrics are generally those with tightly twisted smooth yarns combined to make a closely woven or knit fabric (such as woven gingham, gabardine, and smooth double knits). Clothing that will receive frequent wear is usually constructed from durable textures while special occasion clothing provides variety in less durable textures.

The fabric's weight and the flexibility or stiffness determine the silhouette and the shaping of the fabric to the body. Many patterns suggest the type of fabric suitable for that pattern. Over-the-counter fabric stores may label fabrics according to the type of garment suggested, but many times you must make the decision about the suitability for a garment or item.

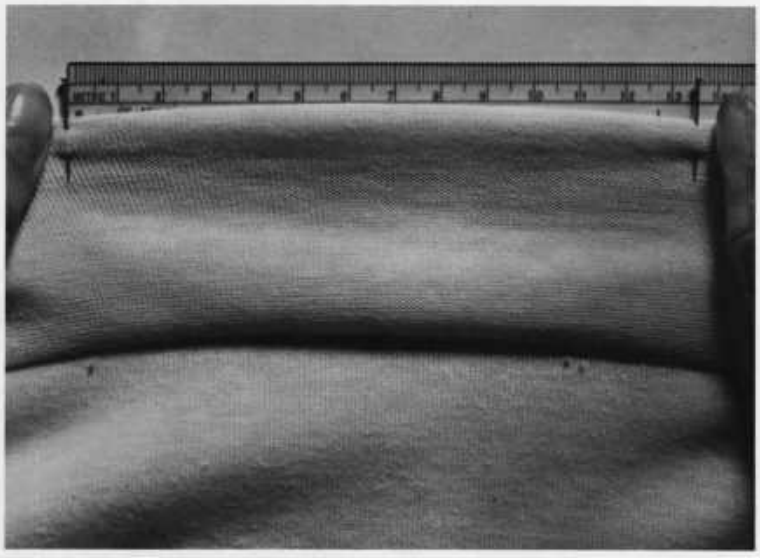
Another texture factor in suitability of a fabric for a specific use is the stability or stretchiness. Many knits have some stretchiness, but not all knits have equal amounts. Woven fabrics with stretch are also being developed; do not assume that because a fabric is a knit, it is stretchy, or if it is a woven fabric that it is stable.

Use pins and a ruler or the stretch gauge on the pattern envelope to determine the stretchability if the pattern calls for a stretchy fabric. Fold the fabric on the crosswise yarn direction or cross grain several inches from the cut or torn edge. Using pins or your thumbnails mark a 4 inch (10 cm) section. Gently but firmly stretch the fabric. If the fabric does not stretch or stretches less than 4 1/2 inches (11.5 cm) it is considered a stable fabric.

If the amount of stretch is at least 5 1/4 inches (13.5 cm), it is considered to be a moderate stretch fabric.

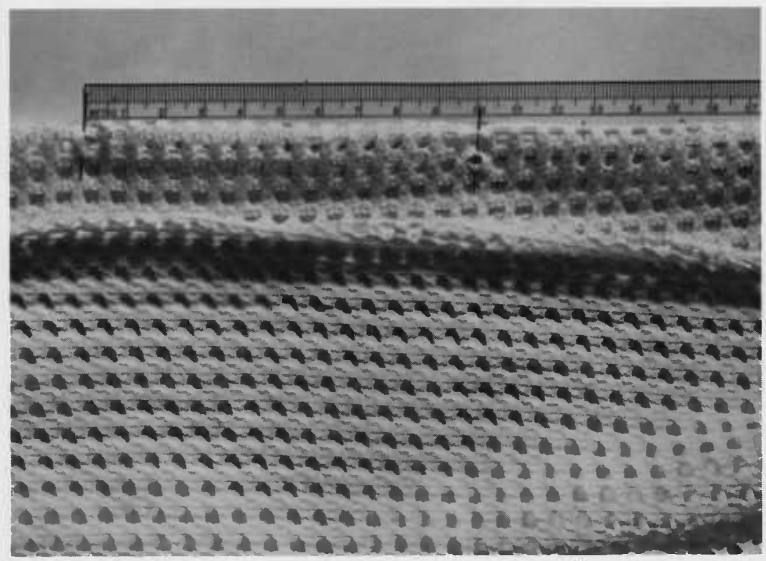


Single knit, measured relaxed

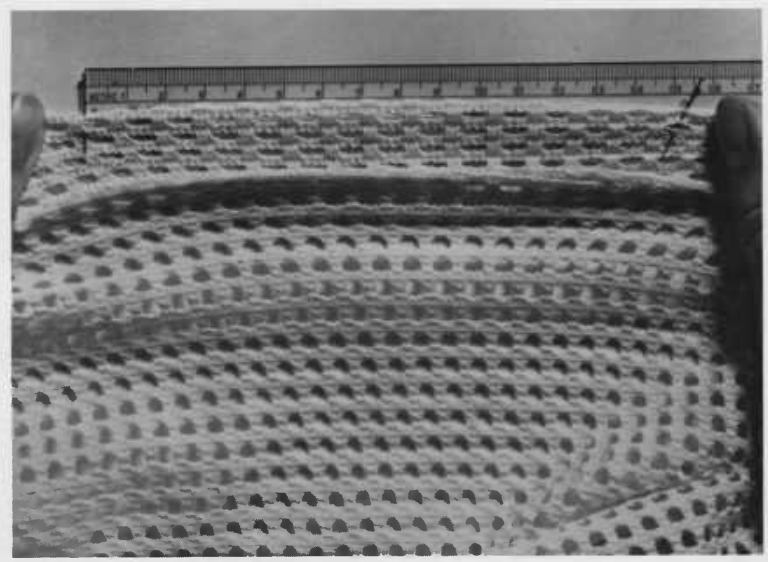


Single knit, stretched to determine "moderate stretch"

If it stretches to over 6 inches (15.3 cm), it is a stretchy fabric. Some patterns are designed to be used with moderate stretch or stretchy fabrics only.



Novelty mesh knit, measured relaxed



Novelty mesh knit, stretched to determine "stretchy"

After analyzing the fabric by itself for color, design, visual texture, and hand, analyze it in relation to the intended use. If you are going to use the fabric for a garment, ask yourself these questions: What type of garment is it, what kind of silhouette does it have, where are seams located, and what kind of construction details will use the fabric to advantage?

Consider also interfacing fabrics for support, shaping, and sharpness to edges, and lining fabrics to give finish and smoothness to the inside of the garment. While these fabrics do not have aesthetic values, they contribute to the beauty of fashion fabrics when both are well coordinated with garment designs.

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