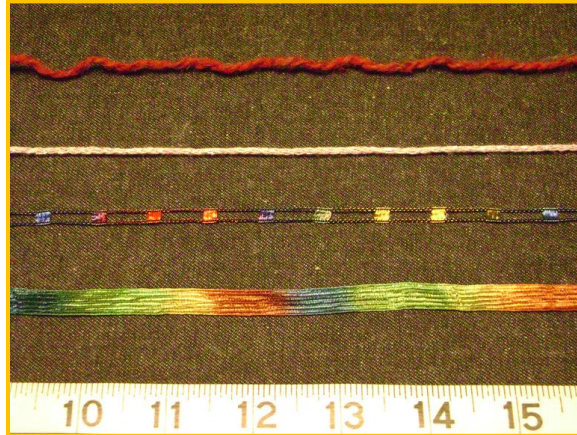


Home Economics

Textiles, Clothing and Fashion



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Topic: Yarn Types

Group Level: Form Four/Form Five Revision

Instructions:

1. Read the information provided on the topic.
2. Review what you have learned by completing the worksheet.
3. Use the answer key to assess your performance.

Yarns

Yarns are composed of textile fibres. The different ways in which these fibres are joined together create the variety of yarn structures available to fabric manufactures. The term yarn may be defined as a long continuous length of interlocked fibres, suitable for use in the production of textiles, sewing, crocheting, knitting, weaving, embroidery, or rope making.

Yarns can be made from:

1. Short, staple-length fibres called spun yarns or staple fibre yarns;
2. Long filament fibres called filament yarns or thrown yarns. Filament yarns can be either monofilament (one filament) or multi filament (several filaments);
3. A combination of both staple and filament fibres. These yarns are identified by various terms such as coverspun or composite yarn.

Yarn Count

Yarns are made in a wide range of thicknesses or fineness according to the purpose for which they are to be used. Yarn count is a number that represents the diameter or fineness of a yarn, either in terms of weight by length or length by weight. The thickness can be expressed by means of symbols; D (weight by length) and S (length by weight) are the commonly used symbols.

1. (D) – Denier is used for yarns made of silk and man-made fibres. This is the weight in grams per 9000 meters of yarn. **The larger the D value, the heavier the yarn and thicker the fabric**, for example 80 D is thicker than 40 D.
2. (S) –Count of yarns for other fibres, expressed in terms of how many 840 yards length in one pound of yarn. **The higher the S value, the finer the yarn, the thinner the fabric**, for example the 40 S yarn is thinner than the 20 S yarn.

Types of Yarns

1. Single Yarn

Made from a single filament or from a number of filaments or staple fibres twisted together to form a single thread. It is the simplest and most common type with a twist either to the right (Z twist) or left (S twist). These twists create shape and motion in the yarn and contribute to the look and performance of knitted fabric.

2. Ply or Folded Yarn

Ply or folded yarn, is one in which two or more single yarns are twisted together in one operation. If two singles are used, the yarn is called a 2 ply; if three are used, a 3 ply; if four are used, a 4 ply. When both the single strands and the final ply yarns are twisted in the same direction, the fibre is firmer, producing harder texture and reducing flexibility. Ply yarns provide strength for heavy industrial fabrics and are also used for delicate-looking sheer fabrics.

3. Cord or Cable Yarn

This yarn is one in which two or more ply yarns are twisted together. Cord yarns may be used as rope or twine. They may also be made into very heavy industrial fabrics, or may be composed of extremely fine fibres that are made up into sheer dress fabrics.

4. Complex or Novelty or Fancy Yarn

This yarn is usually uneven in size, varied in colour, or modified in appearance by the presence of irregularities deliberately produced during their formation. Complex yarns are made for their appearance value and may be single, plied, cord or modified cord construction. Here are some examples of complex yarns:

- ❖ Slub refers to yarns that has been spun with thicker sections along the yarn. It is created to give fabrics more personality. Slub yarn is used in traditional fabrics such as upholstery, lace, curtains and household fabrics in general. But it is becoming more popular in the production of denim, shirting and knitwear.
- ❖ Flock or Flake Yarn is a simple yarn with groups of loose fibres at irregular intervals. Examples of end use of flocked fabrics are garment, carpeting, upholstery fabrics, blankets, bedspreads, wall coverings, and window coverings.
- ❖ Chenille yarn resembles a hairy caterpillar. It is used mainly for decorative fabrics and rugs. Fabrics woven from this yarn are also popular for throws, blankets and upholstery. Chenille upholstery fabric is the most popular of all upholstery materials. This is due to the practical and visually appealing nature of the cloth: chenille is soft, warm, lustrous in appearance, and is very hard wearing.
- ❖ [Boucle](#) (click for pronunciation) yarn has tight loops in the effect yarn at intervals. A boucle fabric is a heavy weight fabric made with boucle yarn. This yarn is popularly used for making various articles of clothing such as overcoats, jackets, sweaters, cardigans, jumpers, blazers as well as skirts, shorts, tops and woollen dresses.

Scarves, gloves, hats and bags made using this yarn are also very popular all over the world.

- ❖ Metallic yarns are primarily used for decorative effects and are composed of metals or a blend of metallic fibre with other fibres. Metallic yarns are used for knitting yarns, trimmings, ribbons, evening gowns, swimsuits, neckties, and in home furnishings as curtains, upholstery and tablecloths.

Worksheet

DIRECTIONS: On the line to the left of column A, write the letter from column B that best fits the yarn description in column A.

(1)

	Column A – Description of yarns	Column B
	Two or more single yarns twisted together	A. Multifilament
	Create shape and motion in the yarn	B. Cord
	Yarn made for appearance value	C. Slub
	Simplest and most common type of yarn	D. Z or S Twist
	Several filament in a single yarn	E. Novelty
	Yarns which may be used as rope or twine	F. Ply
	Yarns that has been spun with thicker sections along the yarn	G. Single

(7 marks)

(2) Define the following terms:

- i. Spun yarns
-
- ii. Composite yarns
-
- iii. Denier
-

(3 marks)

(3) What two factors are used for calculating yarn count?

.....

(2 marks)

(4) Name two end uses (garments/items) of fabric made of the following yarns:

- i. Metallic
- ii. Boucle
- iii. Chenille
- iv. Flock

(8 marks)

Total 20 marks

Answer Key

DIRECTIONS: On the line to the left of column A, write the letter from column B that best fits the yarn description in column A.

(1)

	Column A – Description of yarns	Column B
F	Two or more single yarns twisted together	A. Multifilament
D	Create shape and motion in the yarn	B. Cord
E	Yarn made for appearance value	C. Slub
G	Simplest and most common type of yarn	D. Z or S Twist
A	Several filament in a single yarn	E. Novelty
B	Yarns which may be used as rope or twine	F. Ply
C	Yarns that has been spun with thicker sections along the yarn	G. Single

(1 mark for each correct response)

(7 marks)

(2) Define the following terms:

- iv. Spun yarns **are yarns made from staple-length fibres.**
- v. Composite yarns **are yarns made from a combination of both staple and filament fibres.**
- vi. Denier **is a unit of measurement of the fineness of yarns made of silk and man-made fibres. This is the weight in grams per 9000 meters of yarn.**

(1 mark for each definition)

(3 marks)

(3) What two factors are used for calculating thread count?

(i) Weight and (ii) Length

(1 mark for each factor)

(2 marks)

(4) Name two end uses (garments/items) of fabric made of the following yarns:

- i. Metallic - trimmings, ribbons, evening gowns, swimsuits, neckties, curtains, upholstery, tablecloths.
- ii. Boucle - overcoats, jackets, sweaters, cardigans, jumpers, blazers, skirts, shorts, tops, woollen dresses, scarves, gloves, hats, bags.
- iii. Chenille - throws, blankets, upholstery, rugs
- iv. Flock - carpeting, upholstery fabrics, blankets, bedspreads, wall coverings, window coverings.

(1 mark each for any two end uses of each yarn)

(8 marks)

Total 20 marks

18 – 20 Excellent

15 – 17 Good

14 and under – Review information and try again

References

<https://study.com/academy/lesson/yarn-count-definition-formula-calculation.html>

<https://www.sciencedirect.com/topics/engineering/staple-fiber>

<https://www.testertextile.com/what-is-yarn-count-in-textile/>

<https://www.slideshare.net/suniltalekar1/threads-29516232>

How to Pronounce Boucle

<https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DpGU67BxHVLA&psig=AOvVaw1P0Lh754ripn4YOGeyDZ0C&ust=1587871506317000&source=images&cd=vfe&ved=2ahUKEwjZxPe50ILpAhVOTjABHVc2Ap4Qr4kDegUIARDtAQ>

IMAGE: Speciality Yarns

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