



Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

**CLOTHING FIBERS**

**Directions:** Fill in the following information as you view the video.

1. A fiber is the basic building block of cloth.
2. What is cloth? yarns woven or knit together
3. What are yarns made from? fibers twisted together
4. Each of us uses about 60 pounds of textile fibers a year.
5. Fibers can be classified as natural or synthetic.
6. Natural fibers have their origin from plants or animal protein.
7. Synthetic fibers are called man-made or manufactured fibers.
8. List four (4) natural fibers and three (3) synthetic fibers.

<u>Natural</u>	<u>wool</u>	<u>linen</u>
	<u>cotton</u>	<u>silk</u>
<u>Synthetic</u>	<u>nylon</u>	<u>acrylic</u>
	<u>polyester</u>	

9. Synthetic fibers do not absorb moisture, but natural fibers do.
10. Why are most T-shirts made from 100 percent cotton? to absorb perspiration
11. Since synthetic fibers do not absorb water, they often develop static electricity or cling.
12. T F You cannot tell the fiber in a fabric just by looking at it.
13. T F Fiber content labels are not required on all clothing items.
14. T F A blended fabric always uses three (3) or more fibers.
15. T F Often a blend is one (1) natural and one (1) synthetic fiber used together.
16. T F Polyester/cotton is the most common blend of fibers.
17. T F By blending two (2) fibers you can have the advantages of both fibers.
18. T F To get the benefits of cotton or wool in blended fabrics, the cotton content must be at least 50 percent and the wool content must be at least 80 percent.
19. T F Fiber labels are only found in clothing items.

**NATURAL FIBERS**

20. Cotton was used by Native Americans in about 700 A.D. and the Egyptians 4,000 years ago.
21. After the cotton flower drops from the plant, it is replaced with a pod called a cotton boll.
22. Cotton is no longer harvested by hand but by machines called strippers and pickers.



## CLOTHING FIBERS - PAGE 2

23. The cotton gin separates the fibers from the seeds.
24. The higher grades of cotton fibers are about 3/4 inch(es) to 2 inch(es) long. The longer fibers make a smoother fabric.
25. The highest grade of cotton is called good middling.
26. Cotton fabrics wrinkle easily and shrink about 3 percent unless pretreated to resist shrinking.
27. Cotton is the most used fabric in the world, and the most used natural fabric in the United States.



28. Wool is possibly the oldest fiber known to humans.
29. Wool is a protein substance, just like human hair.
30. The majority of wool comes from sheep.
31. The surface of the wool fiber repels water, and the inner core absorbs water.
32. Wool can absorb almost double its own weight in water and still feel dry to the touch.
33. List three (3) characteristics that wool has because of its absorbency:
1. Resists wrinkles
  2. Flame resistant
  3. Reduces static electricity
34. Wool is woven into fabric by interlacing the yarns on a loom.  
The lengthwise yarns are called the warp.  
The crosswise yarns are called the weft or filling.



35. Linen is made from the fibers of the flax plant.
36. Flax is grown and harvested mostly by hand in Western Europe, mainly in three (3) countries. What are they?  
Belgium Netherlands France
37. Linen has longer fibers than cotton. They are usually 6 inch(es) to 20 inch(es) long. This makes linen stronger and smoother than cotton.
38. List six (6) ways linen is used:
1. bed coverings
  2. handkerchiefs
  3. fine fashion/suits
  4. wall covering
  5. draperies
  6. upholstery
39. Linen is usually more expensive than cotton.





## CLOTHING FIBERS - PAGE 3

40. Silk has always been associated with beauty and luxury.
41. The process of making silk was invented in China about 5,000 years ago.
42. Silkworms used for making the silk fibers feed on mulberry leaves and eat continuously.
43. Each cocoon contains from 900 to 1,300 yards of fibers.
44. A silk thread is as strong as a wire of equal thickness.
- ☺
45. Ramie is made from the ramie plant.
46. Ramie is strong, durable, and absorbent.
47. Ramie fibers are usually used:  
       Alone      XX Blended with other fibers

## SYNTHETIC (MANUFACTURED) FIBERS

48. Polyester is the most commonly used synthetic fiber.
49. Polyester's best quality is that it resists wrinkling.
50. Most synthetic fibers begin as a petroleum product.
51. Dupont introduced its DACRON brand of polyester in 1951.
- ☺
52. Nylon has some of the look and feel of silk.
53. Give six (6) examples of products made of nylon.
- |                             |                               |
|-----------------------------|-------------------------------|
| 1. <u>Women's stockings</u> | 4. <u>Netting</u>             |
| 2. <u>Parachutes</u>        | 5. <u>Outdoor/sports gear</u> |
| 3. <u>Roadbeds</u>          | 6. _____                      |
54. Nylon has replaced wool as the fiber most used in carpets.
55. Nylon was introduced to consumers in 1939 and gained acceptance first as nylon stockings replaced those made of silk.
- ☺
56. Acrylic is a synthetic fiber that is made from coal, air, water, oil, and limestone.
57. Acrylic imitates wool and has many of the same characteristics. It is warm and soft but does not have its water handling ability.
58. A cotton / acrylic blend is often used in sweaters.



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MAN-MADE (MANUFACTURED) FIBERS

- 59. Rayon and acetate start life as trees. These fibers are made from chemically altered wood pulp.
- 60. Rayon was the first man-made fiber used for clothing and dates back to the Civil War.
- 61. T F Rayon wrinkles terribly.
- 62. Until 1924, rayon was known as artificial silk.
- 63. Rayon is commonly used for outer wear, and acetate is commonly used for under wear. Some other uses are:

Rayon: artificial hearts

Acetate: \_\_\_\_\_



- 64. T F There is no one **best** fabric; it depends upon what it is to be used for.

Below are fabric products matched with a fiber. Most are rather poor matches. Explain what qualities of the fiber make it a poor choice for the product.

Wool/swimsuits Ex. = Wool is weak when wet; becomes heavy when it absorbs a lot of water; dries very slowly; may be rough and itchy to your skin; doesn't smell very pleasant when wet.

Nylon/T-shirts nylon is non-absorbent; would be hot

Cotton/business suits wrinkles too easily; wouldn't hold its shape

Polyester/underwear polyester is non-absorbent; would be hot

Silk/stockings silk isn't as stable as nylon; wouldn't hold shape as well

Rayon/parachutes rayon isn't strong enough; would split in thrust of air

Acrylic/towels acrylic is non-absorbent; wouldn't get you dry

Silk/swimsuits silk shows water spots and doesn't hold dyes well; not sun friendly

Wool/track suit wool is weak when wet; becomes heavy with water; odor unpleasant

Rayon/backpacks rayon isn't strong enough; would split with wear

Polyester/cleaning cloth polyester is non-absorbent; wouldn't pick up dirt, etc.

Silk/window curtains silk isn't sun-friendly; would rot quickly

Nylon/sheets nylon isn't absorbent; body perspiration wouldn't be absorbed

Cotton/swimsuits by itself, cotton doesn't hold its shape when wet; suit would fall off