

Name: \_\_\_\_\_

Hour: \_\_\_\_\_

## VIDEO WORKSHEET

# Review

**Directions:** After watching “*Design: All About Textiles*”, answer the following questions.

### NATURAL FIBERS

1. All textiles start as fibers, either \_\_\_\_\_ or \_\_\_\_\_.

2. Natural fibers come from plants, animals and minerals. Name three plant fibers:

Name three animal fibers:

Name one mineral fiber:

3. What are some attributes of cotton that make it a versatile fiber?

4. Bast fibers are fibers that come from the stem of a plant. What are some types of bast fiber?

5. What are some attributes of bast fibers?

6. Some people claim to be allergic to wool. Is wool an allergen?

7. What is felting?

8. Where does silk come from and how is it produced?

## **SYNTHETIC FIBERS**

1. What are synthetic fibers? What percentage of the fiber used in today's textiles are synthetic?

2. Why is nylon used for tents, hiking jackets, camping gear and parachutes?

3. How is rayon made?

4. What are some positive and negative attributes of rayon?

**POSITIVE:**

**NEGATIVE:**

5. What is the diameter of a microfiber?
6. What synthetic fiber is used in apparel and can resemble most any fiber?

## **FABRIC CONSTRUCTION**

1. Yarn is made into fabric using these three construction methods:
  2. Name three types of weave:
  3. How are stripes, plaid, or geometric patterns woven?
  4. What is knitting?
  5. What are some other fabrics that are not woven, knit, or felted?

## **SURFACE DESIGN**

1. What is resist printing?
  2. What is the most common printing method in the United States?
  3. What is block printing?
  4. What is resist dyeing less formally known as?
  5. What is ikat?

# Types of Synthetic Fibers

## Nylon

- Used for clothing and various commercial uses
- Used to make hosiery, swimwear, carpet, car tires
- Has strength and durability
- Able to repel water

## Polyester

- One of the most popular manufactured fibers. Can be used alone or blended with other fibers
- Often mixed with cotton to make easy-care shirts, pants, sheets, and tablecloths
- Used as filler in parkas, jackets, and comforters
- Stays fluffy when wet

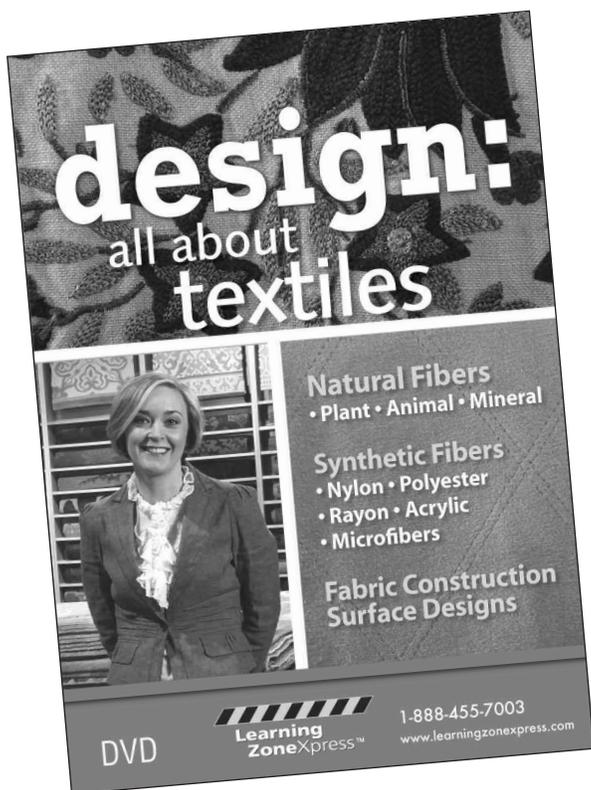
## Rayon

- The first manufactured fiber made from wood pulp
- First sold as “artificial silk”
- Used for clothing and household textiles
- Comfortable to wear and often combined with other fibers

## Acrylic

- Can be woven or knitted
- Used in clothing and household textiles
- Machine washable and wrinkle resistant

| Advantages   | Disadvantages   |
|--|---|
| <ul style="list-style-type: none"><li>• Stronger than natural fibers</li><li>• More abrasion resistant than most natural fibers</li><li>• Less absorbent than natural fibers</li><li>• Quick to dry</li><li>• More uniform size and quality than natural fibers</li><li>• Easier to care for than natural fibers (retain shape better and resist wrinkles)</li><li>• Can be blended with many different types of fiber</li><li>• Resistant to insects and bacteria</li></ul> | <ul style="list-style-type: none"><li>• Unable to absorb moisture — they may feel clammy</li><li>• Static electricity build up can cause items to cling</li><li>• Oil and some stains may be hard to remove</li><li>• More likely to be heat sensitive (can melt when exposed to high heat or a hot iron)</li></ul> |



Name: \_\_\_\_\_

Hour: \_\_\_\_\_

## TEACHER'S KEY

# Review

**Directions:** After watching "Design: All About Textiles", answer the following questions.

### NATURAL FIBERS

1. All textiles start as fibers, either                     *natural*                     or                     *synthetic*                    .

2. Natural fibers come from plants, animals and minerals. Name three plant fibers:

***Possible answers include: cotton, flax, hemp, jute, ramie, bamboo, etc.***

Name three animal fibers:

***Possible answers include: wool, mohair, alpaca, angora, cashmere, camel, silk, etc.***

Name one mineral fiber:

***Possible answers include: asbestos, glass, etc.***

3. What are some attributes of cotton that make it a versatile fiber?

***Has a long and strong fiber***

***Non-allergenic***

***Absorbent***

***Accepts dye easily***

***Can be sterilized***

***Biodegradable***



**Learning  
ZoneXpress™**

©Learning ZoneXpress  
www.learningzonexpress.com  
888.455.7003

4. Bast fibers are fibers that come from the stem of a plant. What are some types of bast fiber?

**Flax (linen)**

**Jute**

**Sisal**

**Abaca**

**Tulip grass**

**Bamboo**

5. What are some attributes of bast fibers?

**Easy to grow the plant (but labor intensive to make the fiber)**

**Non-allergenic**

**Accepts dyes**

**Easy to care for**

6. Some people claim to be allergic to wool. Is wool an allergen?

**Wool has the same chemical composition as hair, so it is not an allergen. The shape of the fiber has barbs in it that sensitive skin can become irritated by the fiber.**

7. What is felting?

**Wool fibers are combined with heat, moisture and pressure to become fused together.**

8. Where does silk come from and how is it produced?

**Silk is produced by domesticated worms that eat fresh mulberry leaves and make cocoons. Each cocoon contains 1,000 yards of filament fiber.**

## **SYNTHETIC FIBERS**

1. What are synthetic fibers? What percentage of the fiber used in today's textiles are synthetic?

**Synthetic fibers are a relatively new development with most fibers created after World War II. They are made in laboratories using chemicals or chemicals combined with natural materials. 75% of fibers used today are synthetic.**

2. Why is nylon used for tents, hiking jackets, camping gear and parachutes?

**Nylon is used for tents, hiking jackets, camping gear and parachutes because it seals out wind and rain. It is not very absorbent and it allows for wicking of moisture away from the skin.**

3. How is rayon made?

**Rayon is made from wood pulp or cotton fibers combined with a chemical solution.**

4. What are some positive and negative attributes of rayon?

**POSITIVE:**

**Highly absorbent**

**Soft**

**Known for its draping ability**

**Easy to dry**

**Biodegradable**

**Holds pigment well**

**NEGATIVE:**

**Will scorch if ironed, but will not melt**

**Affected by UV exposure**

5. What is the diameter of a microfiber?

***A microfiber is less than 10 micrometers in diameter.***

6. What synthetic fiber is used in apparel and can resemble most any fiber?

***Acrylic***

## **FABRIC CONSTRUCTION**

1. Yarn is made into fabric using these three construction methods:

***Weaving***

***Knitting***

***Felting***

2. Name three types of weave:

***Possible answers include: basket weave, twill, herringbone, satin weave***

3. How are stripes, plaid, or geometric patterns woven?

***Stripes, plaid, or geometric patterns are created by alternating colored yarns in the warp and the weft.***

4. What is knitting?

***Knitting is interlocking loops of yarn to create fabric.***

5. What are some other fabrics that are not woven, knit, or felted?

***Leather***

***Vinyl***

***PVC sheeting***

***Tyvek***

***Interfacing***

## **SURFACE DESIGN**

1. What is resist printing?

***Resist printing is when a pattern is created using a dye resistant material such as wax or paste. When the dye and resist are removed a pattern of dyed and undyed fabric is left.***

2. What is the most common printing method in the United States?

***Screen printing***

3. What is block printing?

***Block printing is where pigment is applied by hand to blocks that are like large carved stamps. Each repetition of the pattern is done by hand so it is labor and time intensive.***

4. What is resist dyeing less formally known as?

***Tie dye***

5. What is ikat?

***Ikat is a pattern that is created when yarns are dyed in solid colors or patterns before they are woven***