Unit 4

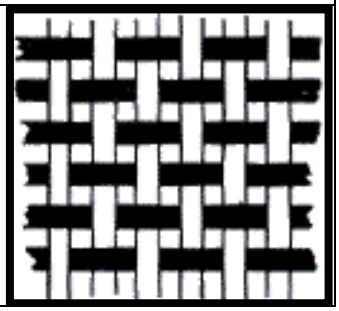
Textiles

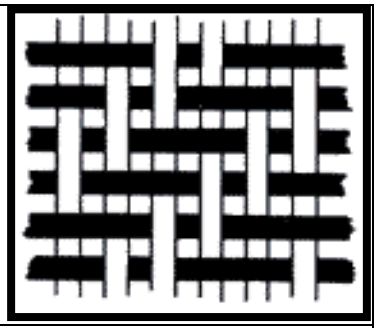
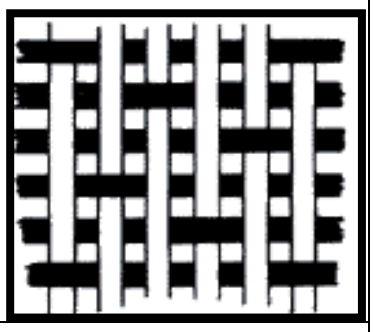
Fibers

1.		Fiber that comes from natural sources, such as plants and animals. They are **absorbent** and **more expensive to produce**. (Cotton, Flax/Linen, Silk and Wool.)
2.		• Comfortable • **Absorbent** (Hydrophilic) • **Wrinkles** Easily • Inexpensive
3.		▪ **Linen** is Made From the **Flax Plant** ▪ Strong ▪ Lint-Free ▪ **Wrinkles** Excessivley
4.		▪ Made from the **Cocoon** of the Silkworm ▪ Soft and Smooth ▪ **Lustrous**
5.		▪ From the Fleece of Sheep ▪ Durable ▪ **Warm** ▪ **Fire Resistant**
6.		Fibers that come from chemical compounds. They are **heat sensitive**, **less absorbent** and **less expensive to produce**. (Nylon, Polyester, Acrylic, Rayon, Spandex, Acetate.)
7.		▪ **Strongest Fiber** ▪ Lightweight ▪ Heat Sensitve
8.		▪ **Most Widely Used Synthetic Fiber** ▪ Strong ▪ Resilient ▪ **Retains Oily Stains** ▪ Repels Moisture (Hydrophobic)
9.		▪ Wool Substitute ▪ Resists Wrinkling ▪ Tends to Pill

10.		▪ First Manufactured Fiber ▪ Made from Wood Pulp ▪ Soft ▪ Absorbent ▪ Wrinkles
11.		▪ **Elasticity** ▪ **Stretch** ▪ Resistant to: Sun Perspiration, Abrasion ▪ Heat Sensitive
12.		▪ Absorbent ▪ Dries Quickly ▪ Silky Appearance and Feel
13.		▪ Fibers are often blended together to **increase strength, durablity, absorption and other characteristics.** ▪ Common Fiber Blends: ▪ Cotton & Polyester ▪ Wool & Nylon ▪ Spandex & Cotton

Fabric Construction

1.		All fabric is made from fiber, either natural or synthetic. The fiber is processed and twisted into yarn. The yarn is then woven or knit into fabric.
2.		Woven fabrics are created by the **interlocking of two separate yarns, the warp and the weft.** Warp: Top to Bottom Weft: Left to Right
3.		▪ The **simplest** weave. ▪ The filling yarn (weft) passes over and under each warp yarn and then alterntes on the next row. 

4.		▪ The **<u>strongest</u>** weave. ▪ Recognized by the obvious diagonal ridges. ▪ The filling yarn (weft) passes over and under 2 or more warp yarns and the shifts to the right or left on each successive row. 
5.		▪ The **<u>most lustrous</u>** weave. ▪ The filling yarn (weft) passes over then under 4 to 8 warp yarns, shifint and repeating on each successive row. 
6.		Created by the **<u>continous interlocking or looping of yarn</u>**. Knits are **<u>stretchy</u>**, easy to care for and inexpenzive to produce.
7.		Created by **<u>interlocking and shrinking a mass of fibers together with heat, mosture and pressure</u>**. • **<u>Felt</u>** is the most common type of non-woven fabric.

<u>Fabric Finishes</u>

1.		Adding color to a synthetic fiber solution before it is extruded.
2.		Dyeing the yarns before they are woven or knitted into fabric.
3.		Dyeing of fabric after weaving or knitting.
4.		Fabric is cut and sewn into the finished product and then dyed.
5.		Process of adding color, pattern or design to the surface of fabrics.

Fabric Texture Activity

Look at the 8 different fabrics and describe the way they look, feel, hang, and move. Then consider a few things that could appropriately be made out of each fabric.

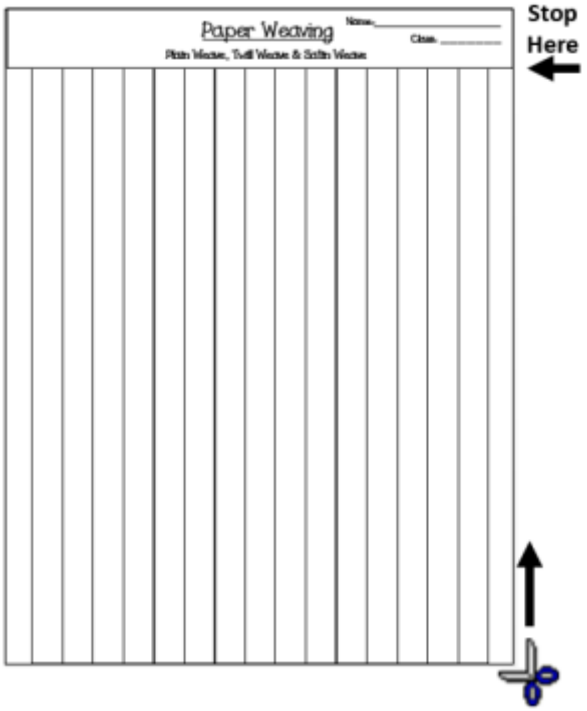
Fabric	Description/Characteristics	What could be made with this fabric?	Fabric Name
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

Paper Weaving Instructions

Materials Needed:

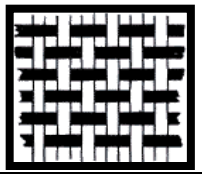
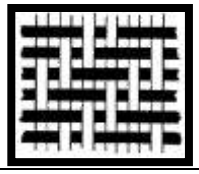
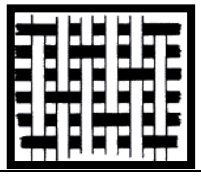
-Paper Weaving Template
-15 Strips of Colored Paper
- 5 each of 3 different colors-(5 for each basic weave)

-4 Strips of White Paper-(used to divide each basic weave)
-Scissors, Clear Tape, Marker/Pen/Pencil



Instructions:

1. Obtain all supplies listed above. **Write your name and class period at the top of the paper weaving template**.
2. Cut the paper weaving template, following each of the solid lines from bottom to top, stopping at the horizontal line at the top of the paper.
3. Beginning with the plain weave, weave 5 strips of colored paper using the following instructions:

1	2	3
Plain Weave	Twill Weave	Satin Weave
Row 1: (Under 1, Over 1)*	Row 7: (Over 2, Under 2)*	Row 13: (Under 1, Over 7)*
Row 2: (Over 1, Under 1)*	Row 8: Under 1, (Over 2, Under 2)*	Row 14: Over 1, (Under 1, Over 7)*
Row 3: (Under 1, Over 1)*	Row 9: (Under 2, Over 2)*	Row 15: Over 2, (Under 1, Over 7)*
Row 4: (Over 1, Under 1)*	Row 10: Over 1, (Under 2, Over 2)*	Row 16: Over 3, (Under 1, Over 7)*
Row 5: (Under 1, Over 1)*	Row 11: (Over 2, Under 2)*	Row 17: Over 4, (Under 1, Over 7)*
White Divider Strip:	White Divider Strip:	White Divider Strip:
Row 6: (Over 1, Under 1)*	Row 12: (Over 1, Under 1)*	Row 18: (Over 1, Under 1)*
		White Divider Strip:
		Row 19: (Under 1, Over 1)*
		
** = Repeat what is in the parenthesis across the row*		

4. To finish your paper weaving project, make sure that all strips are firmly, and straightly, in place. Also, make sure that everything is flat and none of the strips "bubble" up.
   a) Very carefully cut off the extra part of the strips that hang over the edges of the paper weaving template.
   b) Using clear tape, tape down all the edges so that there are no loose strips. Do this for the front and the back. Trim again if necessary.
   c) Using a marker, or pen, label each of the basic weaves on the white dividing strips.
   d) Be sure your name and class period are written at the top of your paper and turn it in