Name: _____ Date: _____

Warp and Weft: The Two Threads of Every Cloth

Circle group

Run your finger over a cotton shirt and look close. You would see two sets of threads crossing at right angles, like a tiny basket. This is woven cloth. It is made of two kinds of thread called the warp and the weft.

The warp threads run lengthwise. They are stretched tight on a frame called a loom. They stay in place. The weft threads go across. They pass over some warp threads and under others. After each pass, the weaver pushes the new row snug against the last. The rows pack into a firm cloth.

The simplest pattern is a plain weave. The weft goes over one warp thread and under the next. It switches on each row. Other patterns come from changing the order. If the weft skips over several warp threads, the cloth gets a diagonal ridge, as in denim. Weavers can change thread colors to make stripes, checks and pictures.

Long ago, passing the weft by hand was slow. So weavers made a shuttle. It is a small tool that carries the thread through the gap. Later, machines did it faster. But the idea stayed the same. A handwoven scarf and a towel from a factory share the same structure.

Warp and weft explain how cloth acts. Fabric stretches least along the threads. It gives most when pulled at an angle. That is one reason tailors often cut pieces on a slant.

Questions

1. Which thread runs lengthwise and stays stretched on the loom?

_____

_____

2. What does the weaver do after each pass of the weft?

_____

_____

3. How does a plain weave work?

_____

_____

4. What is a shuttle used for?

_____

_____

5. How can weavers make stripes or checks?

_____

_____

6. Why might tailors cut cloth on a slant?

_____

_____

Words to know

warp: the threads that run lengthwise on a loom
weft: the threads that cross over and under the warp
loom: a frame or machine used for weaving cloth
shuttle: a tool that carries thread through a weave
diagonal: slanting from one corner toward the opposite one

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Warp and Weft: The Two Threads of Every Cloth

Triangle group

Run your finger across a plain cotton shirt, and look carefully at the surface. If you could magnify it, you would see two sets of threads crossing each other at right angles, like a tiny basket. This is woven cloth, and every piece of it is built from two kinds of thread called the warp and the weft.

The warp threads run lengthwise and are stretched tight on a frame called a loom. They stay in place the entire time. The weft threads travel across, passing over some warp threads and under others. After each pass, the weaver pushes the new row snugly against the one before, so the rows pack together into a firm fabric.

The simplest pattern is called a plain weave, where the weft goes over one warp thread, under the next, and so on, switching on each row. Other patterns come from changing the order. If the weft skips over several warp threads at a time, the cloth gets a diagonal ridge, as in denim. Weavers who change the colors of the threads can form stripes, checks and pictures.

Long ago, passing the weft through by hand was a slow job. Weavers invented a shuttle, a small tool that carries the thread and slides smoothly through the gap. Later, machines took over and could work far faster, though the basic idea stayed the same. A handwoven scarf and a factory-made towel share the same structure.

Understanding warp and weft helps explain why cloth behaves as it does. Fabric stretches least along the threads and gives the most when pulled at an angle, which is one reason tailors often cut pieces along a slant.

Questions

1. Which thread runs lengthwise and stays stretched on the loom?

_____

_____

2. What does the weaver do after each pass of the weft?

_____

_____

3. How does a plain weave work?

_____

_____

4. What is a shuttle used for?

_____

_____

5. How can weavers make stripes or checks?

_____

_____

6. Why might tailors cut cloth along a slant?

_____

_____

Words to know

warp: the threads that run lengthwise on a loom
weft: the threads that cross over and under the warp
loom: a frame or machine used for weaving cloth
shuttle: a tool that carries thread through a weave
diagonal: slanting from one corner toward the opposite one

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

Warp and Weft: The Two Threads of Every Cloth

Square group

Run a finger across a plain cotton shirt and examine the surface closely. If you could magnify it, you would discover two sets of threads crossing one another at right angles, like a minute basket. This is woven cloth, and every portion of it is constructed from two kinds of thread known as the warp and the weft.

The warp threads run lengthwise and are stretched taut on a frame called a loom. They remain fixed throughout the entire process. The weft threads travel across them, passing over some warp threads and beneath others. After each pass, the weaver presses the new row snugly against the one before, so that the rows pack together into a firm, durable fabric.

The simplest design is called a plain weave, in which the weft goes over one warp thread, under the next, and continues in this way, reversing on each row. Other designs arise from altering the order. If the weft skips over several warp threads at a time, the cloth acquires a diagonal ridge, as in denim. Weavers who vary the colors of their threads can produce stripes, checks and even pictures.

Long ago, passing the weft through by hand was a laborious task. Weavers therefore invented a shuttle, a small tool that carries the thread and slides smoothly through the gap. Eventually, machines took over and worked far faster, though the fundamental principle never changed. A handwoven scarf and a factory-made towel share exactly the same structure.

Understanding warp and weft helps to explain why cloth behaves the way it does. Fabric stretches the least along the threads and yields the most when pulled at an angle, which is one reason tailors so often cut their pieces along a slant.

Questions

1. Which thread runs lengthwise and remains stretched tight on the loom?

_____

_____

2. What does the weaver do after each pass of the weft?

_____

_____

3. How does a plain weave work?

_____

_____

4. What is a shuttle used for?

_____

_____

5. How can weavers produce stripes or checks?

_____

_____

6. Why might tailors cut pieces of cloth along a slant?

_____

_____

Words to know

warp: the threads that run lengthwise on a loom
weft: the threads that cross over and under the warp
loom: a frame or machine used for weaving cloth
shuttle: a tool that carries thread through a weave
diagonal: slanting from one corner toward the opposite one

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: Warp and Weft: The Two Threads of Every Cloth

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: Warp and Weft: The Two Threads of Every Cloth

Easier · 236 words · Flesch-Kincaid grade 2.6

1. The warp.
2. Pushes the new row snug against the last one.
3. The weft goes over one warp thread and under the next, switching on each row.
4. It carries the thread through the gap between warp threads.
5. By changing the colors of the threads.
6. Fabric gives the most when pulled at an angle, so a slanted cut stretches and hangs differently.

Triangle: Warp and Weft: The Two Threads of Every Cloth

This passage · 278 words · Flesch-Kincaid grade 6.3

1. The warp.
2. Pushes the new row snugly against the one before it.
3. The weft goes over one warp thread and under the next, switching on each row.
4. It carries the thread and slides through the gap between warp threads.
5. By changing the colors of the threads they use.
6. Fabric gives the most when pulled at an angle, so a slanted cut stretches and hangs differently.

Square: Warp and Weft: The Two Threads of Every Cloth

Harder · 290 words · Flesch-Kincaid grade 7.8

1. The warp.
2. Presses the new row snugly against the one before it.
3. The weft goes over one warp thread and under the next, reversing on each row.
4. It carries the thread and slides through the gap between the warp threads.
5. By varying the colors of the threads they use.
6. Fabric yields the most when pulled at an angle, so a slanted cut stretches and hangs differently.