



Marvelous
Materials



ACTIVITY

Fabric Structures for Movement

Fashion
through science

CLOTHES ARE IMPORTANT:



**THE RIGHT
CLOTHES CAN
MAKE WORK AND
PLAY EASIER.**

WHAT MAKES CLOTHING COMFORTABLE?

Clothing comfort is determined by how easily the body can move.

Different *fabric structures* allow for movement in different ways.

Stretch fabrics make it easy to move.
(that is one reason our t-shirts & sweatpants are so comfortable!)



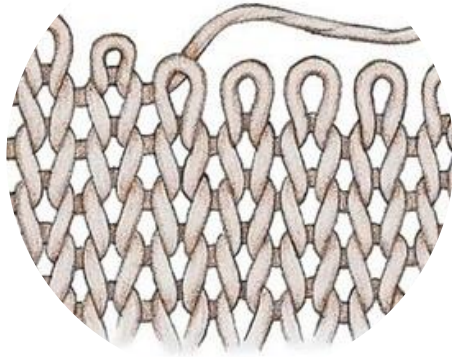
Textiles



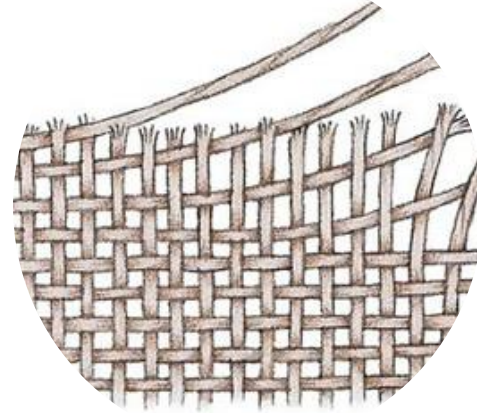
Clothing is made from textiles and other materials.

Textiles are “engineered” or designed to have special properties.

Clothing is made of textiles **STRUCTURED** like these:



Knit textiles are made from one very long yarn, looped together!

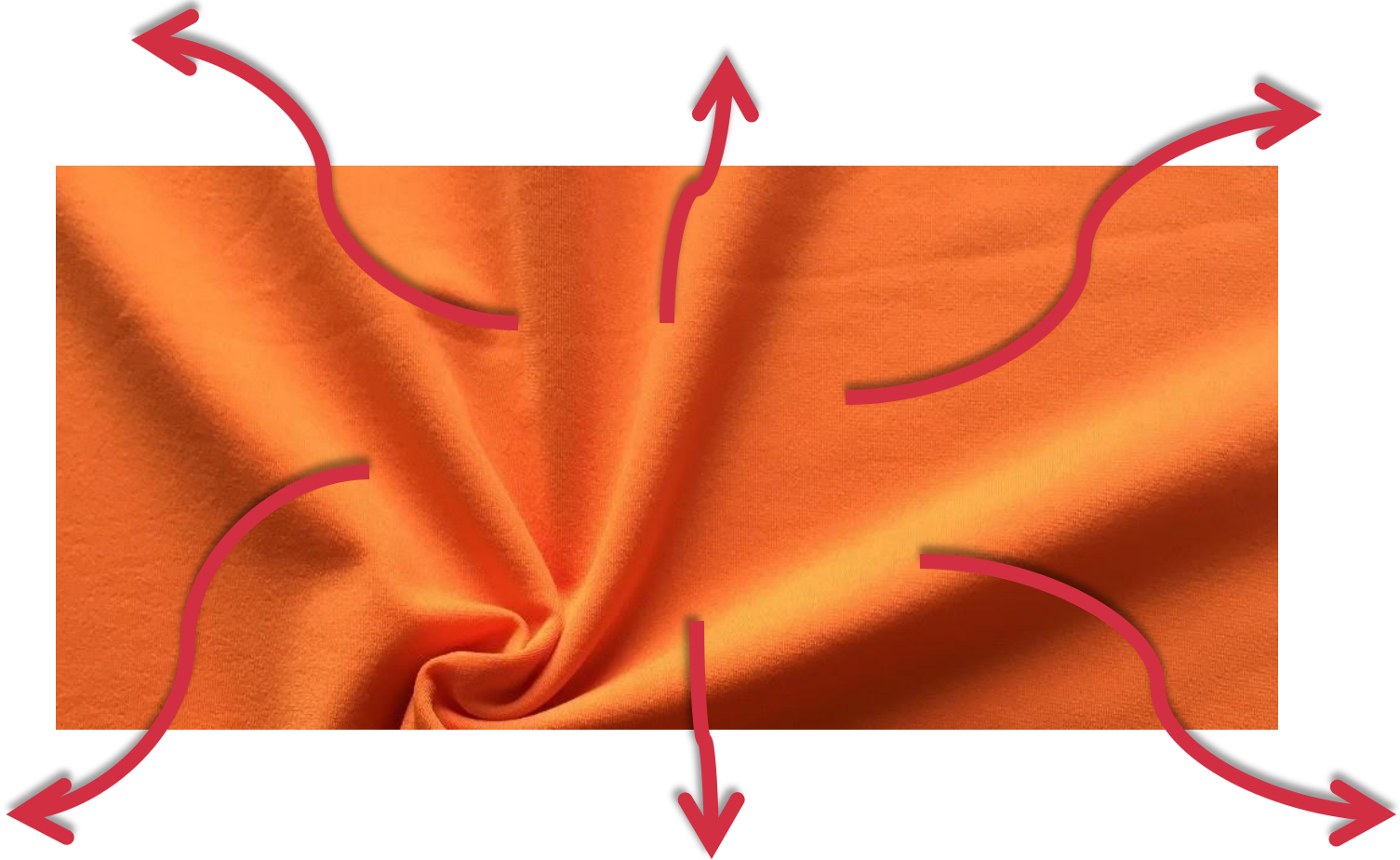


Woven textiles are made from many yarns, interlaced

See what
happens if You
STRETCH
fabrics



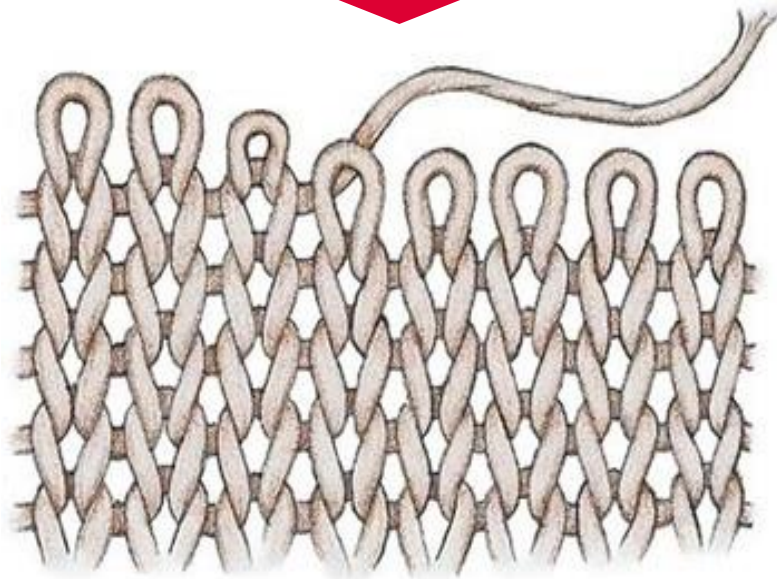
**Try it with woven and knitted fabrics.
Which fabric stretched more?**



**Did the fabrics stretch more in some
directions than others?**

REMEMBER THE FABRIC STRUCTURES: **KNITS** and **WOVENS**?

Loops are flexible and
allow fabric to
stretch.



knit material

Interlaced yarns are
difficult to
stretch.



woven material



Look at the way this Olympic track suit molds to the runner's body and stretches with movement.

Tight fitting garments like this contain a special fiber called SPANDEX!

FACTOID:

Spandex will stretch up to seven times its length and return to its original measurement!



Summary



One aspect of clothing comfort is how easily the body can move while wearing the garment.

Different types of *fabric structures* move with and conform to the body in different ways.

The right clothes make work and play easier.

Sources

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