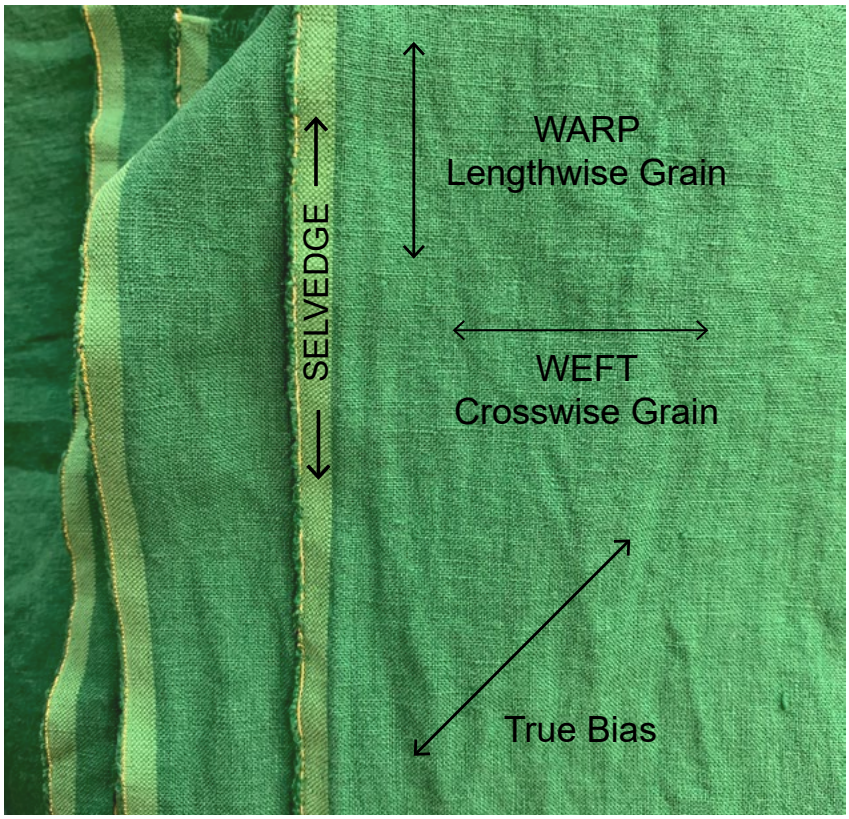
Grainline – Woven fabric

Grainline refers to the weave of the fabric, specifically the direction in which the threads are going. Fabric is created by weaving two yarns/threads at right angles to each other. Understanding how the grainline works is important as this will effect the overall finish of your garment.

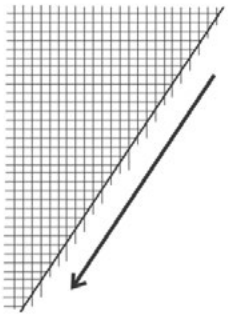
Crosswise, lengthwise, bias, warp, weft....What does all this mean?



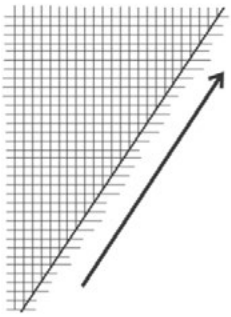
- **Weaving:** In the weaving process, lengthwise (warp) yarns interlace with crosswise (weft) yarns to form a solid sheet of fabric. The selvedge edges of a fabric are firmly woven areas along each lengthwise edge. The lengthwise grain is parallel to the selvedge edges, while the crosswise grain is perpendicular to the selvedge, i.e.; running across the width of the fabric.
- **Lengthwise (warp):** This grainline has very little stretch and generally has the greatest strength. Garments are usually cut to follow the lengthwise grain so that it is placed vertically on the body.
- **Crosswise (weft):** The crosswise grain has more stretch than the lengthwise (warp) and these yarns generally go across or around the body, providing more comfort when wearing a garment. Garments are cut on a crosswise grain when using a fabric such as a border print.
- **Bias:** Woven fabrics stretch when pulled along any bias grainline which are lines at any angle other than the lengthwise (warp) or crosswise (weft) grainlines. True Bias, which has the greatest stretch in a woven fabric, is at a 45 degree angle to the lengthwise (warp) and crosswise (weft) grains
- **True Bias:** Cutting on the true bias makes softly draped garments, however, this can be more difficult to work with as the bias cut edges tend to stretch as they are sewn and handled.
- **Cutting:** When laying pattern pieces out on your fabric for cutting make sure they are placed along the lengthwise grain, unless otherwise stated on your pattern pieces/instructions. Measure from each end of the grainline marking on the pattern piece to the folded edge of selvedge edge of the fabric.

Tips:

- Remember to read pattern instructions to understand what is required for your chosen project and how to layout your pattern pieces.
- The grainline marking is usually a solid straight line with an arrow at each end.
- Stitching **with** the grain of the fabric, not against it, helps to prevent stretching of the fabric.
- Directional stitching is sewn from the wide to narrow areas of a garment.



With grain



Against grain