going from 2-D to 3-D

giant creature by Donna Wilson (right)
3-d form achieved by stuffing flat sewn shapes

3-d form achieved through patterning
Patterns - template created for different parts of an object
Seam Allowances (inlay): area between edge of fabric and stitching line

Seam allowance range: $\frac{1}{4}'' - \frac{1}{2}''$
follow the guide on the sewing machine or draw your own
Making your own patterns
Slash and Spread Technique

Original front sloper

Side-seam angle

Cut.
Pivot.

Cut.
Pivot.

Cut.
Pivot.

Cut.
Pivot.

Cut.
Pivot.

Cut.
Pivot.
3D Models to 2D Patterns

Pepakura
Darts

Segment of fabric folded (or removed) and stitched to create rises or drop in the structure
No SA

Project update May 2014 – Material Reduction: Efficient Fabric-Formed Concrete, Winnipeg, MB, Canada
The branching columns shown here are also formed from flat sheets of fabric using another CAST formwork invention. Photo: CAST, University of Manitoba.

https://www.formfounddesign.com/fabric-forms
On the WS, it gets more interesting. Here is a single-point dart.

\[
a = \text{dart length (excluding SA bit)}
\]
\[
b = \text{depth of dart}
\]
\[
c = \text{width of dart}
\]

- **D** = dart apex
- **E** = dart leg
- **F** = fold of dart
Here is a curved dart - this one is convex, so it's bulgy like a blimp. It has curved dart legs.
Here is a double-point dart. This one is a straight dart (i.e. it is diamond-shaped with straight dart legs). All the annotations are the same as with the single-point dart.

Demo: Darts

Create two patterns for making darts on a 6" x 6" piece of fabric.

Exchange your patterns with two other classmates to sew another dart.
The Art of Manipulating Fabric, Colette Wolff