The Practice of Layering

Layering is the key strategy for staying comfortable in cold and/or wet conditions in the great outdoors. It provides windproofing, temperature regulation and contributes greatly to the vapour transfer action, commonly referred to as breathability. Staying dry is fundamental to staying comfortable. Layering allows the wearer to adapt to local weather conditions and personal physical exertion. As moisture rapidly accelerates temperature loss it is important to implement the three main pillars of layering theory:

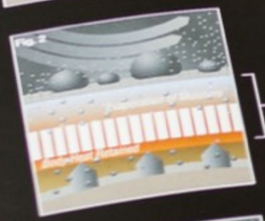
1. The outer layer. A hard-shell outer layer is the first defence against wind and rain. Different techniques or combinations may be employed in the construction of the hard-shell outer. Generally a hard wearing synthetic fabric is backed with coating that does not allow penetration of water, yet allows vapour to pass. Others may be a laminate of fabrics including a membrane. The external facing can also be treated with a DWR or Durable Water Repellent treatment. This keeps the external fibres from becoming saturated allowing the transfer of water vapour from the interior to the exterior, a key factor in breathability and the layering strategy as a whole (see figure 1). In addition to the performance of fabric, venting can help immensely. Should conditions allow, the opening of vents on back, chest, or underarm lets the wearer dump a great deal of excess body heat and moisture, without exposing themselves fully to the elements.

2. The mid layer. Generally microfleece or fleece. The idea here is to find the correct insulation level for the prevailing conditions. Too thin you may freeze, too heavy, you may overheat, sweat and in turn chill (see figure 2). It is important to get the balance right. Remember that if you start to overheat, removing this layer can bring you back to a more favourable operating temperature. This is one of the major advantages of multiple-layering over single-layer strategies.

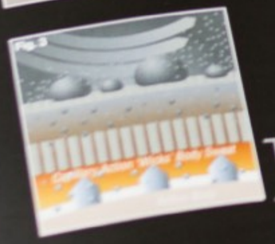
3. The wicking layer. Not to be confused with 'just' thermal underwear. A good wicking base layer fits close to the body. Comprised of synthetics which are non-absorbent, wicking layers transport moisture (sweat) generated by exertion via capillary action (see figure 3). As the fabric is non-absorbent, it makes it's way to a larger surface area evaporating much faster.

Layering works by retaining body heat while expelling water vapour (sweat). At the same time wind is prevented from reducing this heat and rain is repelled by membranes and coatings.

The Outer Shell allows smaller molecules of water vapour to exit through evaporation (breathability) while stopping larger rain droplets from entering (waterproofing).



A Mid Layer Provides adjustable insulation. Trapping warm air inside without holding onto its moisture content.



A Base Layer working next to the skin draws moisture away and expels it through evaporation. This is known as 'wicking'.

The perfect base layer should be close fitting and lightweight. Natural fibres like cotton should be avoided as they retain moisture.

Trespass base layers fit neatly under other layers and are constructed from man-made fibres. This makes them incredibly quick drying and positively high wicking.

Trespass Active Layers are versatile enough to be worn alone during high impact activity.

Trespass Fleeces come in a variety of weights and finishes. These insulating layers can be zoned or autocycled in order to control your own personal environment.

When the rest weather dishes, you can remove the body shell and proceed with the fleece, or should conditions be more like a tropical downpour, remove the fleece and retain the shell.

You are in control.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