

Year 7 Textiles - Design and Technology

| SMART MATERIALS | Material | Example | Properties |
|-----------------|--------------------|-----------------------|--------------------------------------|
| | Thermo chromic | | Changes colour with heat |
| | Photo chromic | PHOTOCHROMIC LENS | Changes colour with light |
| | Memory shape alloy | | Metal that returns to original shape |
| | Hydro-chromic | | Changes colour in water |

| Modern MATERIALS | Material | Example | Properties |
|------------------|---------------------|------------------------------|--|
| | Kevlar | | Very strong and resists cuts, tears. |
| | Nomex | | Heat and fire resistant |
| | Micro-encapsulation | Encapsulation Technology | Tiny beads encapsulated with liquid e.g. antibacterial |
| | Phosphorescent | | Glow in the dark |

Equipment

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|---|---|--|---|
| Sewing machine | Thread | Needle | Scissors |
| One person at a time. Keep fingers away from moving parts. Use slowly and steadily. | Pins | Button | Carry with blade together. Always cut on the table away from fingers. Return to scissor rack when finished. |
| Stitch ripper | Pins and needles are kept in containers. Use carefully pointing away from fingers and body. | Pattern | Iron |
| Tape measure | Zipper | Pattern pieces are used to make paper templates before cutting fabric out. | Extremely hot. Always ask before using. Turn off after use. Store hot plate down on rack. |

Hand Sewing

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|----------------------------------|--|--|
| Running Stitch | Back Stitch | Whip Stitch |
| Running stitch is quick and easy | Back Stitches are strong and look neat | Whip stitches are used to finish and neaten edges. |

More Key words:

- Seam** - joining two separate pieces of fabric together.
- Hem** - fold on the edge of fabric which is sewn down making the edge look neat.
- Fray** - the yarn coming away at the edge of curt fabric.
- Dying** - when the fabric colour is changed by soaking in water and fabric dye.

NATURAL

| | | |
|----------------------------|---------------|---|
| Natural fibre from a plant | Cotton | Used for making jeans, T-shirts and towels. <ul style="list-style-type: none"> Cool to wear Very absorbent Dries slowly Soft Creases easily |
| Natural fibre from a plant | Linen | Used for summer clothing, tea towels and table cloths. <ul style="list-style-type: none"> Very cool to wear Very absorbent Dries quickly Stiffer than cotton Creases badly |
| Natural fibre from a plant | Bamboo | Used for clothing and mixed with other fibres like spandex. <ul style="list-style-type: none"> Cool to wear Very absorbent Soft Sustainable (environmentally friendly) |

SYNTHETIC

| | | |
|-----------------|------------------|---|
| Synthetic Fibre | Viscose | Used for shirts, dresses, linings. <ul style="list-style-type: none"> Low warmth Absorbent Soft Good drape Not durable Creases easily |
| Synthetic Fibre | Nylon | Used for sportswear, socks, seat belts. <ul style="list-style-type: none"> Warm to wear Absorbent Breathable Soft or coarse Can shrink Durable |
| Synthetic Fibre | Polyester | Used for raincoats, Fleece jackets, medical textiles. <ul style="list-style-type: none"> Low warmth Non-absorbent Dries quickly Soft Very durable Crease resistant Can be recycled |