

**‘A’ Level Product Design**

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| **Topic 4** |
| **Smart materials** |
| Develop an understanding of the following type of materials. You should aim to include the following1. Information about the key features, eg abrasion resistance, toughness, heat resistance, aesthetics, costs and availability, ethical consideration special properties etc
2. What is a smart material
3. Everyday usage - Function, real world products
4. limitations, what can it not be used for
5. Can they be enhanced to improve their performance and usefulness
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| **Materials to consider be covered**1. Shape memory alloy
2. Shape memory polymers
3. Self-healing materials
4. Thermochromic, photochromic and electrochromic materials
5. One other of your choice such as conductive paints & e-textiles
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| This work should take up no more room than an **A4 sheet** of paper and be created as a PowerPoint. **It does not need to be word processed.** You will use it to revise from in year 13 and it is therefore in your best interests to investigate thoroughly and put in **key facts only**. |
| Interim Check |  |
| Final Deadline |  |
| Deadline met | Yes | No |