

Unit 2 - Smart Materials

What are we learning about?

You will learn about the design process, developing understanding of manufacturing techniques and putting them into practise through a combination of technical and practical activities.

Why are we learning about it?

It is important, as designers, that we understand how materials can be used to create innovative and interesting products. Through this project you will develop fundamental skills and knowledge in preparation for Year 11.

What new **KNOWLEDGE** will I gain?

- Understanding the design process.
- Understanding of materials and how lamination is used within industry.
- Practical skills – using moulds to produce laminated wood lamps.

What are we learning about?

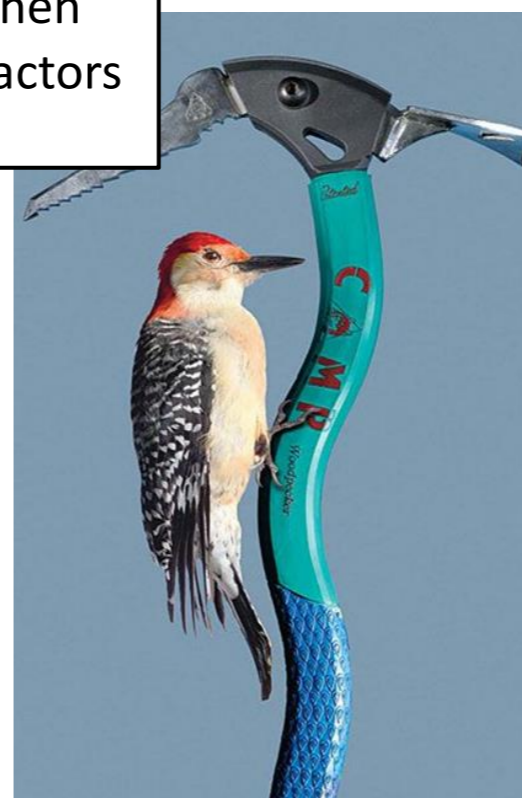
You will learn about materials in more depth, understanding how we have developed materials to be able to change their properties when influenced by environmental factors



Composites



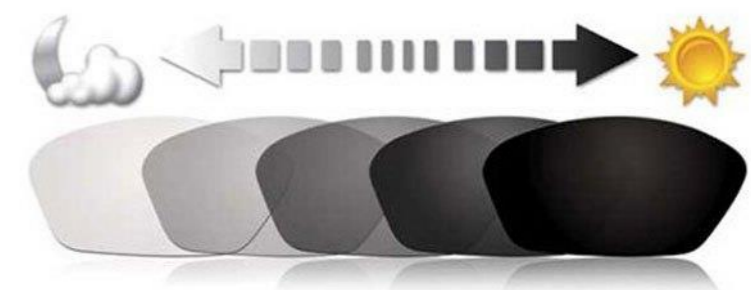
Biomimicry



Thermochromic Pigment



Photochromic Pigment



Polymorph



How does this build on the **KNOWLEDGE** I already have?

This will build on knowledge that you have gained at KS3, understanding how the design process works and using new manufacturing techniques to produce a high-quality product.

What new **SKILLS** will I develop?

- Sketching
- Modelling
- Wood Lamination
- Electronics and Soldering

How does this build on the **SKILLS** I already have?

- Use of hand tools and machinery
- Sketching and Drawing
- Greater understanding of the design process through reflective