

# Materials and Processes

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By the end of year 9 you should be familiar with a range of materials and processes. For your year nine project I would like you to complete a study on this theme.

How can I do this?

- You can draw diagrams; find pictures from the internet or books, include written paragraphs. Remember to label all diagrams.
- All work must be written in your own words.
- Create a Word, Publisher or even a PowerPoint document.
- You could make it an interactive PowerPoint document and include a couple of short process video's
- Use a combination of books and the internet.

Below I have included a couple of web links. These are intended as a starting point only. Use Keywords to search for more information. Don't just use the first information which you find.

[www.technologystudent.com](http://www.technologystudent.com)

<http://www.designinsite.dk>

<http://www.bbc.co.uk/schools/gcsebitesize/design/resistantmaterials/>

## Your tasks

Complete the following tasks. Remember that this is your main project for this subject this year. You must complete 3 of the tasks below and task six which is for everyone. You should have a page for each of the tasks you choose.

### **1. Shaping Plastics**

Write about one process used to shape plastics. Include diagrams. Describe the process step by step. Include information about what type of products can be made using this process. Use subject specific words and include specific names of plastics used in the process.

Choose from: Injection Moulding; Vacuum Forming; Blow Moulding; Line bending.

### **2. Joining Metals**

Write about one process used to join metals. Include diagrams. Describe the process. Include information about what type of products can be made using this process. Use subject specific words and include specific names of metals. Include relevant health and safety information.

### **3. Using a Wood Turning Lathe**

Write about the wood turning lathe. Explain the process and the type of product made using this machine. Include relevant health and safety information.

### **4. Joining two pieces of wood together using a countersunk screw**

Using diagrams explain how to join 2 pieces of wood together using a countersunk screw. Remember to use subject specific language and label your diagrams. Explain the purpose of the different sized holes.

### **5. Materials and the environment.**

Present a page explaining about materials, where they come from, their use and how they affect the environment. Here are some useful key words; Sustainable Resources; Renewable Energy; Hard Woods/Soft Woods. Thermosetting Plastics; Steel Products; Recycling;

### **Task 6 - For Everyone**

Finally now that you are an expert on these topics write a ten question test. Remember to provide the answers. Do this in another colour.