

2 3 1 d Woods

Preparation

- Read pages 38 -39

Resources

- Examples of the different types of wood and the products from which they are made

Key Points Woods for Modelling

Softwoods

- Cone bearing conifers
- Needle like leaves
- Managed forestry
- The grain is hard to shape
- Lightweight, easier to work with, suitable for modelling
- MDF is an alternative material

Suggest teacher finds an image of a kitchen furnished in pine

Hardwoods

- Broad leaved trees
- Seeds enclosed
- Close grain: highly decorative surface finishes
- Expensive, high quality products
- Balsa though is inexpensive and suitable for modelling

Suggest teacher finds an image of outdoor garden furniture made from hardwood

Suggest teacher finds an image of chess pieces made from hardwood

Softwoods	Hardwoods
<ul style="list-style-type: none"> <input type="checkbox"/> Northern hemisphere, especially N America, Scandinavia, Siberia, Europe (colder regions) 	<ul style="list-style-type: none"> <input type="checkbox"/> 000s of species worldwide <input type="checkbox"/> Deciduous, broad leaf trees in Japan and New Zealand (temperate) <input type="checkbox"/> Evergreens in Central/South America and, Africa, Asia (tropical/sub-tropical)
<ul style="list-style-type: none"> <input type="checkbox"/> Fast growing <input type="checkbox"/> Cheaper <input type="checkbox"/> Straight trunks <input type="checkbox"/> Economic cultivation <input type="checkbox"/> Little wastage - used for manufactured boards and paper <input type="checkbox"/> Building construction and joiner <input type="checkbox"/> 90% UK usage imported from Europe 	<ul style="list-style-type: none"> <input type="checkbox"/> Slow growing <input type="checkbox"/> More expensive <input type="checkbox"/> More durable <input type="checkbox"/> More variety of colour, texture, figure <input type="checkbox"/> Exotic timbers converted to veneers

Wider study

- Table 2.6 Read up Hardwoods and Softwoods (page 39)
- Commercial D&T programme Focus Resistant Materials/Woods
- All about Woods <http://www.technologystudent.com/designpro/natwd1.htm>
<http://www.designandtech.com/resistantmaterials>
- Natural woods in detail <http://www.technologystudent.com/rmflash1/natwd1.html>
- Sustainable forestry <http://www.technologystudent.com/prddes1/susenv1.html>

Assignment

- Around the home and garden, look for and photograph examples of products made from different types of softwoods and hardwoods
- Think back to your experiences of working with MDF in the school workshop

Homework

- As above

Revision questions

Specification and Learning Objectives

Aesthetic, functional and mechanical properties, application and advantages/disadvantages of the following woods for the creation of models and prototypes:

- hardwoods
 - jelutong
 - balsa
- softwood
 - pine