

I should already know:

- The design process
- Apply correct workshop Health and Safety

I will learn:

Workshop Safety
You will understand how to work safely in the workshop. You will show you can follow key health and safety rules and use tools with a sensible manner.

Practical Skills
You will use a range of tools and equipment to create your bug hotel. You will learn how to mark out with accuracy and use tools and equipment to cut and secure material together and problem solve.

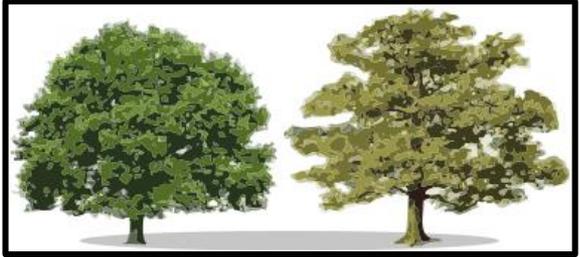
CAD/CAM
You will understand how CAD/CAM plays a wide part in Technology and how it has changed the design and manufacturing industry. You will explore elements of CAD/CAM through the use of the laser cutter.

This will help in the future:

Understand a range of tools and equipment which will help you throughout technology. You will also understand the importance of marking out with accuracy.

Key Words

Hardwood	the hard, compact wood or timber of various trees, as the oak, cherry, maple, or mahogany. It is slow growing and more expensive than softwood
Manufactured board	A wood based material made up from layers of recycled wood usually held together with an adhesive
Softwood	A softwood normally comes from an evergreen tree such as pine. It is cheaper than hardwood and grows faster
Product Analysis	A way to look at and describe/ break down existing products
Design Brief	A statement used to inform the designing of a product
Manufacture	The making of a product



Greater Depth Challenge

Research into the environmental impacts of wood. What will happen if we chop down too many trees? How do we ensure this does not happen?



Further Reading

Health and Safety in the workshop



Non Negotiables in The Workshop - Health & Safety

Your safety is the most important factor in the workshop. We are ALL responsible for our own safety, please use common sense around us.

There are some basic rules when in the workshop;

- Carefully listen to instructions
- Do not interfere with others
- Keep a safe distance when others are using machinery
- Know where the emergency stop buttons are
- Always wear an apron
- Always wear eye protection
- Do not have any loose clothing
- Tie long hair back and tuck in ties
- Do not touch any tools/equipment until instructed by the teacher

DO NOT use equipment until you have been fully instructed on the safe use of the equipment. Your teacher will sign to confirm you have received the training



Tools & Equipment



Pillar Drill

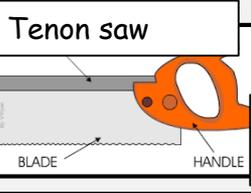


Belt Sander

Try-square



Task: Create a guide to using all or some of the tools and equipment you have used/will be using this half term



Tenon saw



Power Drill

Task: Create a workshop Health & Safety poster for a new year 7 pupil starting at oasis Don Valley

WHAT ARE SOFTWOODS ?

Softwoods are from trees that have needles / exposed seeds, not leaves. They grow quickly, compared to most hardwoods. When sawn and planed they tend to be light/pale in colour. Softwoods also tend to be cheaper than hardwoods.

Softwoods are used by the construction industry and are use to produce paper pulp, and card products.

WHAT ARE HARDWOODS ?

Sometimes called broad-leaf trees. Lose their leaves seasonally, in winter. Hardwoods tend to be harder than softwoods (with the exception of Balsa Wood). They have a wider variety of colour and texture than softwoods. Hard woods tend to be more expensive than softwoods and take longer to mature.

WHAT ARE MANMADE BOARDS ?

Manmade boards are commonly used in the construction industry, for interior fittings and furniture. They are more stable than natural woods and are less likely to warp and twist out of shape.

The three main types are; plywoods (laminated boards), particle boards and fibreboards.

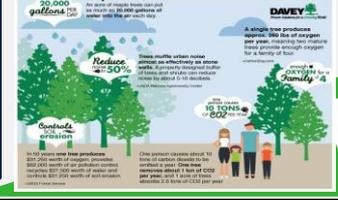
They are all manmade in factories / mills. They are usually composed of natural woods and resin, which binds them together.

Task: Cutting down trees to use for wood has an impact on the environment. Research what FSC stands for and how it helps reduce the environmental impacts

Task: You will use a manufactured board this half term. Research into what a manufactured board is. Why is it different to a hardwood and softwood? Why is it a popular choice of material?

Task: Why are trees play such an important role in our eco-system? Create a research sheet to show your findings

<http://www.davey.com/arboret-advice/pdfs/environmental-benefits/>



Health and Safety in the workshop



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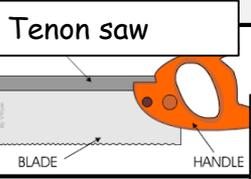


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