



**Year 8
Summer
Term**

Pathway 2/3/4

**Subject: Design Technology (Resistant Materials)
Book Ends Project**

Learning Intention: Woods categories and Processes This project is about Softwoods and manufactured wood boards . Students will learn the difference between the different categories of woods including manufactured boards and their characteristics. Students will learn about MDF, and Pine , and how to join it using a lap joint. They will also learn how to cut a complex shape and use an electric fretsaw.

Key knowledge that should be learned during this SoW

All (Pathway 2)

Most (Pathway 3)

Some (Pathway 4)

Concept:

To design and construct a pair of pine bookends with MDF animal inserts. Using a lap joint and dowel pegs to assemble.The use of an electric fret saw to cut complex shapes.

Knowledge:

All students should be able to understand what soft wood is and manufactured wood board

All students will be able to use the appropriate tools to cut the lap joints for the bookend frames with some support and make the animal inserts with support on the fret saws and fix them in the frames.

All students will be able to draw 2 design ideas relating to the theme of the zoo in 2D drawing with complete

Most students will be able to name 2 softwoods and 2 manufactured wood boards

Most students should be able to make the lap joints for the bookend frames and choose some of the relevant tools with little support and make amendments to the design as needed.

Most students will draw and cut the animal shapes using a fretsaw with

Some students will be able to name 3 types of softwood and up to 4 of the different types of manufactured wood boards and their properties and characteristics.

Some students will be able to choose the tools to make the lap joints and be able to mark it out independently .They should be able to ,and change the original design to suit their needs.

Some students will be able to draw 4 design ideas for ther inserts and may

	<p>support.</p> <p>All students will assemble and paint final bookends.</p>	<p>some support.</p> <p>Most students will draw at least 3 design ideas for the bookends in 2D and choose one.</p> <p>Most students will be able assemble the frames and fix the animal inserts with support. Students will paint the finished items.</p>	<p>attempt 3D using isometric paper.</p> <p>Some students will cut their animal shapes out using the fretsaw with very little support.</p> <p>Some students will assemble their bookend frames and inserts independently and paint them.</p>
Key Skills:	<p>To know the names of the softwood and manufactured board that is used for the project. To know the names of some of the different tools to be used. To know the name of the joint used for the frame</p> <p>To be able to cut a lap joint with support.</p> <p>Cutting animal shapes with a coping saw and practice using a fret saw.</p>	<p>To know the names of 2 softwoods and 2 manufactured boards and their uses .To know the names of the tools needed for the project and some uses. To know the names of 2 joints and what tools are needed to make them for the bookends.</p> <p>Marking out and cutting lap joints and use of the coping saw and fret saws with a little assistance.</p>	<p>To know the names of three or four softwoods and manufactured boards with their characteristics and uses .To know the names of all the tools needed for the project and uses . To know the names of 2 joints and what tools are needed to make them for the bookends.</p> <p>Marking out and cutting the lap joints and the dowel fixings using a cordless drill.</p> <p>Cutting out the animal shapes using a fretsaw mainly.</p>
Language and/or communication skills:	<p>Softwood Manufactured Boards</p> <p>Pine MDF, PVA, Nails,</p>	<p>Lap Joints, Butt Joints</p> <p>Cutting, filing, sanding ,measuring</p> <p>Ruler, tri square, tenon saw, chisel,</p>	<p>To be able to draw in 2D and colour in</p> <p>To be able to use stencils.</p>

		mallet, G clamp, vice. Assembly	
Curricular Links	Links to other learning within the subject are: Science biology ,maths ,Geography,		