## The Warriner School Subject Curriculum Map

## **Unit objectives: (NC Statements)**

- To develop knowledge of specialist tools, techniques, processes, equipment.
- To understand the importance of choosing appropriate methods of construction and assembly,
- Identify suitable components and the criteria for their use.
- Understand basic forms of forces acting on a structure to maintain equilibrium.
- To produce a high-quality product.

## Context for study:

- To develop an understanding of factors influencing the assembly of a number of structural components to form a simple functioning desk lamp.
- Using a range of hand and machine tools and develop the skills necessary to manufacture a quality outcome.
- Learning about woods, fixtures and fastenings and polymers both natural and manufactured,
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Sequence of learning: Knowledge content - list of statements of what students should know by progressing through this unit (identify key tier 2/3 vocabulary in bold)

- To know the importance of Health & Safety in the workshop
- To know the physical properties certain materials plywood, hardboard, MDF, PVC foamboard, acrylic sheet, rigid polystyrene.
- To be able to identify and select appropriate tools and equipment bench hook, steel rule, try square, tenon saw, coping saw, wood glue, abrasive paper, varnish. Mortising machine, pillar drill, drill bit
- To know that orthographic plan drawings are used to communicate and provide a source of information on how a product is constructed.
- To understand the need for **accuracy** in marking out to ensure **precision** in **assembly**.
- To know the appropriate ways to hold and use tools correctly and safely.
- To evaluate and identify ways to improve and progress the work when snags are encountered.
- To give consideration to the next stages in planning and development for the next stage of construction.
- To know how and which order to achieve a quality finish using appropriate tools, such as **files**, **abrasive papers**, **band faced sander**, **bobbin sander** and applied finishes such as varnish.
- Apply appropriate making skills and processes to produce a high-quality functioning prototype that fully meets all requirements of the design specification and is fit for purpose,
- evaluate by critically analysing the work against a given specification to identify "what went well and what could be done better if".

Possible Misconceptions and adaptive responses to these: <i>identified through</i>	Literacy and Oracy development opportunities:
formative assessment/retrieval practice/diagnostic questioning.	Details of high-quality texts, explicit vocabulary teaching, modelled writing,
Q&A during the lessons	structured talk.
Short answer questions that demonstrate understanding and AfL	Hardwoods and softwoods
Demonstration, scaffolding, exemplar materials.	Written specification



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Assessment/Final outcomes: <i>How will students apply their detailed learning in a</i>	Use of technical vocabulary in discussion
meaningful way that respects the subject's discipline?	Written evaluation of the outcome
0	Completed work booklet
	Labelling diagrams
	<ul> <li>Feedback on assessed work.</li> </ul>
	<ul> <li>Encourage students to answer in full sentences</li> </ul>