

**SKILLS FRAMEWORK FOR LANDSCAPE  
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE**

<b>TSC Category</b>	Design					
<b>TSC</b>	Material Studies and Production Processes					
<b>TSC Description</b>	Administer the study of the properties and applications of materials to facilitate production, construction, engineering and processing of materials into specific designs					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
			<b>LNS-PMN-3021-1.1-1</b>	<b>LNS-PMN-4021-1.1-1</b>	<b>LNS-PMN-5021-1.1-1</b>	
			Study and apply relevant materials to specific designs	Analyse materials and their production techniques and processes to determine the most appropriate materials to be utilised for designs	Explore possible new and existing materials in order to uncover new efficient and effective methods of utilising materials	
<b>Knowledge</b>			<ul style="list-style-type: none"> <li>• Methods of material selection</li> <li>• Contemporary issues and historical precedents regarding materials</li> <li>• Types of structure and surface</li> <li>• Types of joineries</li> <li>• Design and construction processes</li> <li>• Classification of materials</li> <li>• Research methodologies for material culture studies</li> </ul>	<ul style="list-style-type: none"> <li>• Methods of material selection</li> <li>• Contemporary issues and historical precedents regarding materials</li> <li>• Types of structure and surface</li> <li>• Types of joineries and their functions</li> <li>• Design and construction processes</li> <li>• Classification of materials</li> <li>• Research methodologies for material culture studies</li> <li>• Concepts of digital materials</li> </ul>	<ul style="list-style-type: none"> <li>• Methods of material selection</li> <li>• Behaviour, properties and evolution of different types of materials</li> <li>• Properties of different joineries and their strengths and weaknesses</li> <li>• Interfacing solutions and detailing</li> <li>• Current and future roles of new materials in design, sustainability and industry</li> <li>• Concepts and principles of digital materials</li> <li>• Stakeholder management</li> </ul>	
<b>Abilities</b>			<ul style="list-style-type: none"> <li>• Maintain collections of materials both in their original forms and processed forms</li> <li>• Analyse users' demands and purchase patterns to identify materials necessary for production</li> <li>• Acquire knowledge of properties of materials in order to propose suitable materials for designs</li> <li>• Recommend materials and construction methods for designs</li> </ul>	<ul style="list-style-type: none"> <li>• Implement the application of suitable materials for the organisation</li> <li>• Analyse the use of familiar materials in unfamiliar ways</li> <li>• Execute research to examine the quality of materials used for the organisation</li> <li>• Develop material planning models to ensure proper utilisation</li> </ul>	<ul style="list-style-type: none"> <li>• Lead research on alternative materials and material processing that could be used for the organisation</li> <li>• Attain buy-ins on the usage of new materials for the organisation</li> <li>• Facilitate exploration of new materials, material processing and related technologies to produce new material applications, new material developments</li> </ul>	

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			<p>taking into consideration cost and environmental factors</p> <ul style="list-style-type: none"> <li>• Inspect the final design work to ensure that they function as intended</li> </ul>	<p>of materials for production</p> <ul style="list-style-type: none"> <li>• Evaluate materials utilised to ensure that they are aligned to organisational and international standards</li> <li>• Manage the collection of materials and production methods to ensure range for experimentation</li> <li>• Propose strategies to push the boundaries of material use and production methods</li> </ul>	<p>or new material languages and production methods</p> <ul style="list-style-type: none"> <li>• Initiate the selection of materials at the beginning of the design process to introduce innovation in design work</li> </ul>	
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