

INDUSTRIAL TECHNOLOGY

**BUILDING TECHNOLOGY
LEVEL 7**

Topic	Skills	Knowledge	Understanding	Attitude	Content	Method /Strategies	Material	Evaluation	Area of Integration
Timber- the ideal material	<p>Identifying things made from trees.</p> <p>Locate on a map of Guyana the forested areas.</p> <p>Identify things made with the wood.</p> <p>Identify and name some locally grown timber.</p>	<p>List the varied uses of wood. e.g. medicine, food, furniture, tools, toys and weapons, heat source and shelter.</p> <p>Name the forested areas in Guyana.</p> <p>Name woods indigenous to Guyana.</p>	<p>The usefulness of wood to man, and its abundance in Guyana.</p> <p>Trees were perhaps man's first shelter.</p> <p>Explain how a tree grows and the qualities of wood.</p>	<p>Develop an awareness that wood is obtained from trees.</p> <p>Develop an awareness for the qualities of wood – e.g. durability, strength, workability, suitability.</p>	<p>A good knowledge of the material needed for one's livelihood is important.</p> <p>The development in technology with regards to the use of wood.</p> <p>The forested areas which produce our timber trees in abundance.</p> <p>Reforestation- wood as a renewable source.</p> <p>The advantages of wood for the production of consumer items.</p>	<p>Teacher ask questions on the following:-</p> <ol style="list-style-type: none"> 1. Where wood comes from? 2. What was the first weapon made from? 3. Where are timber trees found in Guyana? 4. Students are asked to name the main parts of a tree. 5. What are the functions of the main parts identified? <p>(i) Compile notes; start a portfolio.</p> <p>(ii) Field trips.</p> <p>(iii) Explain and discuss qualities and properties.</p>	<p>1.Specimen a live tree.</p> <p>2. Maps showing where timber trees are found.</p> <p>Textbook – Industrial Arts for Secondary School BK1.</p>	<p>Oral questions and answers on the importance and value of wood, its uses, how it is obtained, qualities.</p> <p>Written work given</p> <p>Quiz.</p>	<p>Woods</p> <p>Agriculture Science</p> <p>Home Economics</p> <p>Social Studies</p> <p>Integrated Science.</p>

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Job opportunities in the field of woods.	How to research and file information about people who work with wood.	List the job opportunities accessible in the field of woods. Explain the function of each career identified.	Identifying possible careers for the future. Develop an appreciation for available exposure in the field.	Recognize the number of career choices identified in the field of woods. Respect for each category of worker. Successful careers depend on positive study habits and application.	The wood industry offers many opportunities for work. People who work include:- Furniture-designer, Teacher, Cabinet-maker, Carpenter, Forester, Pattern maker.	List and discuss the function of each occupation identified. Identify and discuss related trades, how some integrate. Compile notes.	Textbook – Industrial Arts for Secondary School Bk 1. Handouts and other material on careers, and career opportunities.	Written assignment to produce a list of woods. Related occupations with their related duties. Written Work Quiz.	Woods Agriculture Science, Integrated Science.

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Safety		List general workshop safety rules.	Develop the ability to observe safety rules.	<p>Cultivate the habit of safety while developing skills.</p> <p>Develop the practice of safe behaviour everywhere, e.g. home, workshop etc.</p> <p>Orderliness</p>	<p>The need for safe practices:</p> <ul style="list-style-type: none"> - the importance of safe behaviour. - How to develop good safety habits. - Safety rules for the workshop. <p>Clothing and personal dress.</p> <p>Good housekeeping.</p> <p>Hand tools injuries.</p>	<p>State, discuss and demonstrate the need for observing safety practices.</p> <p>Written work – given rules.</p>	<p>Textbook – Industrial Arts for Secondary School BK 1.</p> <p>Tools: e.g. chisels, power tools.</p>	<p>Observe and demonstrate safety precautions in handling of tools.</p> <p>Prepare a list of unsafe acts seen in the home, on the street, in school.</p>	<p>Woods</p> <p>Agriculture Science</p> <p>Home Economics.</p>

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Introduction to basic hand tools Identification of basic hand tools used in Woodwork.	Draw and label the parts of each tool.	List basic hand tools used in Woodwork.	Develop acceptable tool use habits. Explain the use of each tool.	Hand tools – their use, care, maintenance, safety procedures. Develop the proper use and care for tools.	Identifying tools Selecting specific tools Handling tools Written work	Textbook – Theory and Practical of Woodwork by George Love Tools	Oral question – the difference between a hand tool and a power tool. Explanation of the purpose of given tools.		Wood Agriculture Science Integrated Science.

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Classifica- tion of hand tools. List types of tools use e.g. layout, measuring and checking cuts- e.g. rip cross cut, san simple curves.	(1) Identifying hand tools according to their use (2) Explain the work of each tool.	Description of tools used for: (a) Layout, measuring devices e.g. rule, try square, marking gauge etc. (b) Cutting tools, saws, planes, chisels spoke shave, etc. (c) Driving tools:- hammers, mallets and screwdrivers. (d) Holding tools: - e.g. clamps etc.	Selection of:- (1) marking out tools. 2) Cutting tools (3) Holding tools (4) Drilling and boring tools.	Develop an awareness in the correct use of : (a) measuring and layout tools. (b) Cutting tools. (c) Driving tools.	Tools are classified according to the work they do: (1) Layout, measuring devices e.g. rule, try square, marking guage etc. (2) Cutting tools, saws, planes, chisels, spoke shave, etc. (3) Driving tools:- hammers, mallets and screwdrivers. (4) Holding tools: - e.g. clamps etc.	Demonstration on the use of the following tools: (a) layout measuring and checking tools. (b) Cutting tools – Cross cut saw Rip saw. Project – (1) Wall plaque (2) Bench hook Drawing of project to dimension.	Text: Industrial Arts for Secondary School BK1. Tools – material for project. Given list of tools classified according to their uses.	Oral question on the following:- - Classification of tools. - Purpose of specific tools – - Observation of students. Demonstration on project.	Woods Agriculture Science Mathematics

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Introduction of Guyana Timber	Identifying timbers grown in Guyana.	List the names of timber grown in Guyana.	Explain the purpose of these identified timber.	Timber producing trees grow in the hilly and mountainous parts of Guyana. Some of them are:- Crabwood, Greenheart, Wallaba, Purpleheart etc.		Examining sample species of Guyana timber. Discussion of – (a) appearance of each specie. (b) purpose of each specie.	Text;- sample of species.	Oral questions on the following:- - Sample of wood - Application of each.	Wood Agriculture Science Integrated Science Social Studies.
The work bench	Identifying the appearance of a work bench.	List the parts of the work bench. Identifying the important features of a work bench.	State the use of each part identifying the following facts – tidiness not abused.	Develop awareness that the work bench is necessary to support the timber during operation.	The woodworker needs a work bench to support the timber, while he works on it with tools.	Demonstrate the use of each part of the work bench. Explain care and maintenance of the work bench.	Work bench Tools: Project: Textbook	Practical Demonstration by students.	Metal, Mathematics Technical Drawing.
Foreign woods	Identification of foreign timber. Identify hardwoods and softwoods.	List well known foreign woods; e.g. oak, pitch pine, ash and mahogany. Describe the characteristic features of each timber identified.	Selection of timber which give the best result e.g. use of softwoods. Use of hardwoods.	Develop an awareness for these foreign woods.	Softwoods – Pitch pine used for heavy construction. Douglas fir – similar to pitch pine- etc. Hardwoods – ash-used for tool handles. Mahogany – used for high class joinery.		Text- The Theory and Practice of Woodwork By George Love.		Woods Agriculture Science Home Economics.

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The classification of the timber tree.	Identifying the groups of trees that are important to the Woodworker.	Name the two groups of timber trees.	Certain trees provide the timbers for common use.	Develop an awareness that there are two groups of timber trees.	-The Conifers are the conebearing trees with needle leaves, whose seeds are produced "naked". -The Dicotyledons -The Our Deciduous trees.		Text- The Theory and Practice of Woodwork by George Love.		Woods Agriculture Science Home Economics.
The Growth and structure of wood	Identifying parts seen in the cross-section of a tree trunk. Sketch and label parts identified in the section of a tree trunk.	List parts identified in the cross-section of a tree trunk. Explain the growth and structure of timber.	Discuss the importance of each part identified.	Develop an awareness on the function of each identified part seen in the structure of wood.	Like all living organisms, trees are composed of immense numbers of minute cells or sacs of different shapes, structures and purposes e.g. annual rings, heartwood, sapwood etc.		Text:- Theory and Practice of Woodwork by George Love		Woods Agriculture Science Home Economics