INDUSTRIAL TECHNOLOGY

BUILDING TECHNOLOGY
LEVEL 8

Topic	Skills	Knowledge	Understanding	Attitude	Content	Method/ Strategies	Materials	Evaluation	Area of Integration
Safety, Health, and Welfare.	Practice safety in all working environments. Demonstrate how safe habits can preserve life.	List and discuss general safety in workshop tools, equipment, gears, and accessories.	Define materials, tools, equipment, gears, accessories. Describe how to get professional help when an accident occurs.	Safety must be constantly practiced to preserve life and limb, to avoid damage to tools materials, machines.	Types of safety materials, tools, equipment, gear, accessories. Types of accidents, injuries, emergencies. Background When? Where? Why? How? Whose involved	State, discuss, and write each rule. Insist on safe work procedure and use of workshop.	Industrial Arts for Secondary Schools BK 2. General wood working	Prepare a list of unsafe acts seen in the home, on the streets, and in the school.	Woodwork Metal work

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					What's involved; result of conclusion; Recommen-dation -Safety precautions and rules associated with the use of hand tools.				

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Hand Tools		List the uses of each tool.	Saw across the grain of wood with hand saw. Assemble and adjust plane.	Develop an awareness of each hand tool.	Hand tools - use and care. Jack plane, Try square saw, chisel and marking gauge	Identifying tools. Listing and discussing each operation done by tools.	Textbook General woodwork	Oral questions Demonstrate the uses	Woodwork

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Some Practical Operation Measure-ment and Layout.	How to use a ruler to measure. How to use a try-square. How to use a Marking Gauge.	List common measuring and layout tools. Identify the common layout tools	Measure and layout work.	The successful completion of an operation depends on accurate layout.	Marking out.	Demonstrate the use of each tool. Let students imitate the demonstration. Provide opportunity for use and practice of the skills on project.		Using ruler Try-square and marking Gauge in a practical situation.	Woodwork Metalwork

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Sawing	How to rip a stock.	State the definition for ripping and cross cutting.		Always select the appropriate saw for the operation.	Cutting with rip and cross cut saws.	Show students the rip and cross cut saws. Explain their use. Demonstrate their use.		Observe and guide students as they perform operation	Wood work

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Dressing Timber.	How to select face side. How to plane a face edge and side. How to square an end.	List the steps in dressing timber. List the tools for dressing timber. State the definition for dressing timber.	Selection of materials and the correct tools for the operation.	The right choice in selecting materials. Prepare material the correct way.	Prepare a face side. Prepare a face edge. Squaring and testing for flatness.	Explain the term: dressing. Explain face side and face edge. Let students select and prepare face side and face edge.		Let students list stage in dressing timber.	Woodwork Metal work.

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Timber Producing Trees.	Sketch the general shape of trees that produce hardwood and softwood.	State the types of trees and the shapes of leaves that produce hardwood and soft wood. State the definition for felling, logging, transportation.			Basic characteristic of hardwood and softwood. Felling, logging, and transportation.			Let student explain hardwood and soft wood. Let student state how the classification is done in term of leaves. Let students name local and foreign wood that fit into the two classes.	Woodwork Biology.

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Conversation	Sketch showing Timber converted by various methods.	State the definition for conversion. List method of conversion.	Explain methods of conversion of lumber in relation to their specific uses.		Definition of conversion. Methods of conversion: plain sawn, Quarter sawn, Tangential cut.	State the method used in conversion.		Let students state and explain the definition.	Wood work Biology

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Preservation of Woods		List the different types of wood. Preservation.	Identify defects found in wood.		Common wood defects and diseases: bowing, knots, dry rot, checks warps etc.	Name the defects and diseases. Cause of defects.		Give causes of defects.	Woodwork Science

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Timber Seasoning		State the method used in seasoning.	Describe method of seasoning lumber.		Seasoning of timber. Types, processes and effects. Natural and Artificial.	State and discuss the method used in seasoning. Sketch method used in seasoning.		Oral Question on Seasoning.	Woodwork Science

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Common Woodwork, joints and cuts	List common cuts in woodwork, such as mitre, dado, chamfer, bevel etc. List the tools necessary for making the cut named.	How to layout and cut mitre, a dado, a bevel, a chamfer, a taper etc.		Although practice may be gained by making cuts on wood scraps, it is much better to include the cuts as part of a job.	The Mitre, Dado Chamfer Bevel, Rebate and taper.	-Describe a common cut. -Explain its application. Demonstration -how the cut is laid out and done. Let student mark out and practise cuts.		Examine the cut for neatness and accuracy.	Woods Technical Drawing

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Wood-Work Joint, Butt Joint, Mortise and Tenon Joint.	How to make a butt joint. How to make a mortise and Tenon joint.	State what a butt joint is. List the tools for making a butt joint. State what a mortise and Tenon joint is. List the tools for making a mortise and tenon joint.	List the tools the use to make joints. (List the tools used for making a Joint.)	The butt joint. The mortise and tenon joint.		Describe the joint. Point out examples of the joint on common objects on a chart. State the use of the joint. Demonstrate how to make the joint. Let students incorporate the joint in a job.		Let students sketch the joint. Let students give examples of where the joint could be used with good effect. Examine the joint made by the student.	Woodwork Technical Drawing.

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Fasteners and Fastening Nails.	Sketch kinds of nails; straight driving.	List kinds of nails. Identify each kind of nail. State what straight driving is. List tools for driving, setting, and redrawing nails.		Nails and other fastening devices should always be carefully chosen to give the maximum holding power.	Nails, Wire nails finishing nails, brads, panel tacks.	Show each kind of nail. Explain their uses. Demonstrate straight driving. Demonstrate redrawal of nails. Let the students drive nails at various angles.		State examples of job to be done and let students say what size and type of nail would be most appropriate.	State examples of jobs and let students say what type and size of nail would be most appropriate.

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Screws	Sketch a typical wood screw and label its parts.	List common types of wood screws. Identify the parts of a common wood screw.			Screws: common wood screws, Flat head counter sink screw, round head screw.	Explain how screws work, using a drawing of shank hole and pilot hole. Demonstrate how to bore and fix a screw. Give practice to students.		Ask students to state how screw sizes are determined. Ask students to sketch and label the holes needed to fasten two pieces of timber with a screw.	

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Boring Tools- Rachet Brace	How to fit a bit to a rachet brace. How to use the rachet brace.	List parts of a rachet brace. State the uses of a rachet brace.			The rachet brace.	Show the brace. Explain its use and the use of each part. Demonstrate how to use brace.		Ask students to identify the racket brace from among other tools. Let students say why the tool is called a rachet brace.	Wood Metals

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Hand Drill	How to use a hand drill or a breast drill.	List the parts of a hand drill. List the parts of a breast drill.			The Hand Drill The Breast Drill	Show the hand drill. Explain its use, sketch and label it parts. Demonstrate how to use the drill.	General wood-working	Let students identify the hand drill. Ask students to state the use of the hand drill.	Woods Metals

Topic	Skills	Knowledge	Understanding	Attitude	Content	Method/ Strategies	Materials	Evaluation	Area of Integration
Finishes: Function, Types and Application of Finishes.	Applying finishes to project.	List types of paint, varnishes and stain. List the properties of paint, varnish stain. Apply stains, paint, varnishes to masonry, metal, and wood surface.	Define finishes Describe the steps in applying finishes.		Types :(emulsion, oil, enamel) Composition, water resistance, preservation, appearance, protection. Brushes rollers, sprayguns , preparation of surface, precaution, maintenance.	Explain the purpose of finishes. Demonstrate how finishes are applied.		Identify the different kinds of finishes. Prepare a surface and apply finish.	Woods Metal