

Yr 10 Industrial Technology – Wood Lesson Plan

Topic/Main Concept/Theme: Cabinet Work – Side Panel Assembly

SYLLABUS CONTENT to be covered (Objectives)

- 1 knowledge of and competence in applying Occupational Health & Safety (OHS) risk management procedures and practices
- 2 knowledge, skills and an appreciation of quality in the design and production of practical projects
- 3 knowledge and understanding of the relationship between the properties of materials and their applications
- 4 skills in communicating ideas, processes and technical information with a range of audiences
- 5 an appreciation of the relationship between technology, leisure and lifestyle activities and further learning
- 6 the ability to critically evaluate manufactured products in order to become a discriminating consumer
- 7 knowledge and understanding of the role of traditional, current, new and emerging technologies in industry and their impact on society and the environment

SYLLABUS OUTCOMES to be covered

- 5.1.1 identifies, assesses and manages the risks and OHS issues associated with the use of a range of materials, hand tools, machine tools and processes
- 5.1.2 applies OHS practices to hand tools, machine tools, equipment and processes
- 5.2.1 applies design principles in the modification, development and production of projects
- 5.2.2 identifies, selects and competently uses a range of hand and machine tools, equipment and processes to produce quality practical projects
- 5.3.1 justifies the use of a range of relevant and associated materials
- 5.3.2 selects and uses appropriate materials for specific applications
- 5.4.1 selects, applies and interprets a range of suitable communication techniques in the development, planning, production and presentation of ideas and projects
- 5.4.2 works cooperatively with others in the achievement of common goals
- 5.5.1 applies and transfers acquired knowledge and skills to subsequent learning experiences in a variety of contexts and projects
- 5.6.1 evaluates products in terms of functional, economic, aesthetic and environmental qualities and quality of construction
- 5.7.1 describes, analyses and uses a range of current, new and emerging technologies and their various applications
- 5.7.2 describes, analyses and evaluates the impact of technology on society, the environment and cultural issues locally and globally

Students will learn about:

- the safe use and handling of hand, power and machine tools
- the use of personal protective equipment in the workshop
- the properties and working characteristics of solid timber including:

Students will learn to:

- safely use tools, materials and equipment
- use personal protective equipment when working with materials, tools and machines
- consider basic timber working characteristics and use solid timbers in the production of

<ul style="list-style-type: none"> - strength - grain direction - colour - defects <ul style="list-style-type: none"> • portable power tools and machines used for: <ul style="list-style-type: none"> - drilling - sanding - cutting 	practical projects <ul style="list-style-type: none"> • use machines and portable power tools in the production of practical projects 			
Cross Curriculum Content	ICT	Aboriginal and Indigenous	Work, Employment and Enterprise	Civics and Citizenship
	Difference and Diversity	Environment	Gender	
Key Competencies	Collecting Analysing and organising information	Communicating ideas and Information	Planning and organising activities	Working with others in teams
	Using mathematical ideas and techniques	Solving problems	Using Technology	
Literacy		Numeracy		
<ul style="list-style-type: none"> • Reading working drawings and cutting lists 		<ul style="list-style-type: none"> • Angles • Measurements 		

Considerations/Preparation		
Prior Knowledge/Experience <ul style="list-style-type: none"> • In the workshop • Biscuit joints • Gluing and clamping 	Resources/Materials/Technology <ul style="list-style-type: none"> • Timber • Tri square • Pencil • Drop saw • Disc sander • Biscuit joiner • PPE • Glue • Sash Cramps 	Key Vocab <ul style="list-style-type: none"> • Biscuit Joints • Uprights • Side rails • Sash Cramps
Safety Risk Correct PPE Safety test done on power tools		Key Questions <ul style="list-style-type: none"> • Why do we use biscuit joints to join our frame? • Why do we use sash cramps over quick grips to clamp our frame

Class/Stage: 5		Lesson/Period: 3		Lesson Length: 55 mins	
STAGE OF LESSON	TEACHER ACTIONS	STUDENT ACTIONS	QUESTIONING/ UNDERSTANDING?	TIME	RESOURCES
1. LINKING -what have they already learnt? -assumed knowledge? -link to last lesson?	-Shoe Check -Call Roll Make sure sash cramps are available and not being used by another class Stock up on biscuit joints and glue	Change shoes if necessary		5mins	Roll
3. INTRODUCTION ✓ Context of the lesson ✓ Expected outcomes/goals ✓ Key question/s	-Most people will be up to cutting their biscuit joints this lesson For those of you who have cut them I will show you how to glue and clamp your side panel assy.	Students to listen	All students should have their biscuit joints cut in their timber by today. Most should be starting to glue and clamp.	5mins	
4. THE BODY ✓ Teacher directed learning? ✓ Independent student inquiry/learning?	Let students continue on with marking and cutting their biscuit joints.	Measure timber and mark. Cut biscuit joints – 8 places.	Visually see if anyone needs assistance	20mins	Bench hook – biscuit jig Timber Clamp Biscuit joiner Safety glasses

	<p>When first student finishes: Call all students to middle of room for demonstration on gluing and clamping side panel assy.</p> <ul style="list-style-type: none"> - 2 sash clamps on bench - Glue in holes and add biscuit - Line up your pencil lines - Clamp from bottom with sash clamps - Wet rag to take off excess glue - Stand up on side wall to dry 	Watch	<p>Is anyone not sure how to use this?</p> <p>Ask a fellow student to help you as you have to work fairly quickly with glue</p>	5mins	<p>Frame Biscuits Glue 2 sash cramps Wet rag</p>
	Teacher to supervise students gluing and clamping their panels	Students to continue on with side assy, wherever they're up to.	Watch that students are using correct PPE	15mins	
<p>5. CONCLUSION</p> <ul style="list-style-type: none"> ✓ Pack up and organise ✓ Summary of lesson ✓ Future directions/ linking to next lesson 	<p>Teacher to call pack up time Start delegating jobs such as sweeping Make sure all clamped jobs are away.</p>	<p>Students to put timber away Clean up room sweep</p>		5mins	Broom

6. EVALUATION
REFLECTION

- Were the students showing a good understanding of how to glue and clamp their frames?
- Was the time management of the lesson OK? Did it run over or was it too short?
- Is anyone lagging behind?