DEVELOPING ASSESSMENT CRITERIA IN INDUSTRIAL TECHNOLOGY

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Typically in Industrial Technology, assessment tasks are derived from units of work based on projects which occur over a term or more. In these cases it is often difficult to separate the teaching and learning activity from the focus of assessment for the internal assessment program.

While the teacher will make assessment judgements and provide advice to students throughout the project, the assessment program will need to focus on specific outcomes and content in each of the 3 to 5 tasks. It is recommended that each task focus on a manageable number of outcomes, perhaps 3 to 5.

The task featured in this article is the first in the Preliminary course of *Timber products and furniture industries*. It addresses industry-specific content regarding component manufacturing, the safe and correct use of tools, equipment and machinery and teamwork from the design and management content area.

This task engages students in a group activity. The students will work in groups to produce a dining chair. Each group will manufacture a sufficient number of a selected component to enable a class set of chairs to be manufactured. Each group will develop at least one jig to aid manufacture.

This task addresses 5 outcomes. Aspects of some of these outcomes will be further assessed in later tasks. For example, this task does not address the aspects of equipment maintenance techniques in Outcome P2.1.

Included are the table showing how assessment criteria were developed and the student handout about the task. It is important to note that the whole project would build learning about many more outcomes, but the task itself focuses on 5 outcomes. This allows the task to focus adequately on each selected outcome.

Components of the task	***P1.2 identifies appropriate equipment, production and manufacturing techniques, including new and developing technologies***	***P2.1 describes and uses safe working practices and correct workshop equipment maintenance techniques***	***P2.2 works effectively in team situations***	***P4.3 identifies and explains the properties and characteristics of materials/ components through the production of projects***	***P6.2 identifies and explains the principles of quality and quality control***
1. Identify the materials used in your component of the chair and explain properties and characteristics. (P4.3)				• List all of the materials used in your component • Correctly identify and relate relevant properties and characteristics of materials to the chair	
2. Present your hazard identification records for the project (2.1)		• Identify relevant hazards • Propose and implement appropriate hazard reduction strategies			

	P1.2	P2.1	P2.2	P4.3	P6.2
3. Analyse how effective your work practices were to ensure the safe manufacture of the component. Your analysis will need to reflect the observations made by your teacher during the project. (P2.1)		• Accurately describe your work practices related to safety • Compare your work practices with the strategies you proposed to implement • Discuss areas of work practices that could be made safer			
4. Identify and justify the equipment and manufacturing techniques used in the production of your component. (P1.2)	• List the equipment and manufacturing techniques used • Provide relevant explanation for the use of equipment and manufacturing techniques				
5. Evaluate the effectiveness of the jig made by your group in producing a component of consistent quality. (P6.2)					• Explain the role of the jig • Identify criteria for judging the effectiveness of the jig • Discuss to what extent the jig met the criteria
6. Explain how the equipment and manufacturing techniques used in the production of a single chair would be varied to ensure the consistent quality of each chair in a production run of 20 items. (P1.2, P6.2)	• Describe relevant equipment and manufacturing techniques which would be used in a commercial production run				• Explain how the commercial equipment and manufacturing techniques show principles of quality control
7. Evaluate the effectiveness of the team in completing a high-quality component and suggest ways your group could have worked more effectively. Your analysis will need to reflect the observations made by your teacher during the project. (P2.2)			• Accurately describe the assigned roles and responsibilities of each group member and how the members implemented their roles • Identify criteria for effective team work • Discuss to what extent the team met the criteria		

STUDENT HANDOUT

Industrial Technology: Preliminary assessment task
Topic: Group project – Dining chair

Assessment task	1
Time allowed	10 weeks
Due date	Wk10, T1
Weighting	10%

Outcomes to be assessed:

P1.2 identifies appropriate equipment, production and manufacturing techniques, including new and developing technologies

P2.1 describes and uses safe working practices and correct workshop equipment maintenance techniques

P2.2 works effectively in team situations

P4.3 identifies and explains the properties and characteristics of materials/components through the production of projects

P6.2 identifies and explains the principles of quality and quality control

Task description

For this assessment task you will be required to each submit a written report based on the activities undertaken in the Dining Chair project. This task will not directly assess the completed chairs or how you made them. Your written report, however, needs to reflect what really happened in the project. Teachers' observations during the project will be used to verify the accuracy of your report.

Components of the task	Assessment criteria
1. Identify the materials used in your component of the chair and explain properties and characteristics. (P4.3)	• List all materials used in your component • Correctly identify and relate relevant properties and characteristics of materials to the chair
2. Present your hazard identification records for the project (P2.1)	• Identify relevant hazards • Propose and implement appropriate hazard reduction strategies
3. Analyse how effective your work practices were to ensure the safe manufacture of the component. Your analysis will need to reflect the observations made by your teacher during the project. (P2.1)	• Accurately describe your work practices related to safety • Compare your work practices with the strategies you proposed to implement • Discuss areas of work practices that could be made safer
4. Identify and justify the equipment and manufacturing techniques used in the production of your component. (P1.2)	• List the equipment and manufacturing techniques used • Provide relevant explanation for the use of equipment and manufacturing techniques
5. Evaluate the effectiveness of the jig made by your group in producing a component which is consistent in quality. (P6.2)	• Explain the role of the jig • Identify criteria for judging the effectiveness of the jig • Discuss to what extent the jig met the criteria
6. Explain how the equipment and manufacturing techniques used in the production of a single chair would be varied to ensure the consistent quality of each chair in a production run of 20 items. (P1.2, P6.2)	• Describe the relevant equipment and manufacturing techniques which would be used in a commercial production run • Explain how the commercial equipment and manufacturing techniques show principles of quality control
7. Evaluate the effectiveness of the team in completing a high-quality component and suggest ways your group could have worked more effectively. Your analysis will need to reflect the observations made by your teacher during the project. (P2.2)	• Accurately describe the assigned roles and responsibilities of each group member and how the members implemented their roles • Identify criteria for effective team work • Discuss to what extent the team met the criteria