**NZQA**

**Approved**

Achievement standard: 91345 Version 3

Standard title: Implement advanced procedures using textile materials to make a specified product with special features

Level: 2

Credits: 6

Resource title: The inside of infrastructure

Resource reference: Construction and Mechanical Technologies VP-2.21 v2

Vocational pathway: Construction and Infrastructure

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| Quality assurance status | These materials have been quality assured by NZQA. NZQA Approved number A-A-02-2015-91345-02-8227 |
| Authenticity of evidence | Assessors/educators must manage authenticity for any assessment from a public source, because learners may have access to the assessment schedule or exemplar material.Using this assessment resource without modification may mean that learners’ work is not authentic. Assessors/ educators may need to change figures, measurements or data sources or set a different context or topic to be investigated or a different text to read or perform. |

Vocational Pathway Assessment Resource

Achievement standard: 91345

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Learner instructions

# Introduction

This assessment activity requires you to implement advanced procedures using textile materials to make a protective tent with at least two special features. This might be a tent that is used, for example, when undergoing infrastructure related repairs or maintenance on the street; or in the case of an accident – such as an electrical explosion. These tents are sometimes referred to as ‘manhole guard tent’ or ‘splicing tent’ or ‘tent frame and cover’.

You are going to be assessed on how efficiently you implement advanced procedures using textile materials to make a tent with special features. You need to show that you can select and schedule techniques to achieve special features, and apply techniques and testing procedures that comply with relevant safety regulations to make the tent, with independence, accuracy and efficiency.

The following instructions provide you with a way to structure your work so you can demonstrate what you have learnt and achieve success in this standard.

Assessor/educator note: It is expected that the assessor/educator will read the learner instructions, and modify them if necessary to suit their learners.

# Task

Make a tent with special features, for example with an industry logo or safety messages appliquéd onto one of the walls, holding system for blower duct tubing, roll up doors with zip closures, or welt pockets.

Your tent must include at least two special features, and must meet the specifications.

## Before starting

Special features are features that require the use of advanced skills. They include (but are not limited to):

* style features, such as welt pockets
* decorative features such as an appliquéd logo
* structural features, such as reinforcing or doors/windows that withstand harsh conditions; or windows that also meet ventilation requirements.

Read the specifications provided to you, and if necessary, talk to your assessor/educator to ensure you understand them. Alternatively, devise your own and check with your assessor/educator that the specifications for your product and the materials you intend using are suitable (this is to ensure you have access to all grades of achievement, and you are not trying to make a product that is either too simple or too difficult for Level 2).

Ensure that you do the following**:**

* plan what techniques you need to undertake to achieve your special features and the order (schedule) in which you will do them. The pattern you work with may include instructions that outline one method; however there may be other ways that ensure a better quality outcome
* make sure you know how to apply these techniques so that you comply with health and safety regulations within your workplace
* select your materials and practise the techniques you will use until you can apply them efficiently and confidently
* make sure you are familiar with the testing required to monitor special feature construction, and to ensure your final product meets your specifications
* decide how you will keep evidence of what you did, how it worked, and how you addressed any problems. For example this might include making notes on your schedule to show the results of the tests you carried out, and taking photographs to show the process you followed.

## Making the tent

Now you are ready to go! Make your tent to meet your specifications, following your schedule.

Your assessor/educator will need to see evidence of the accuracy of your completed tent, and how the tests you carried out ensure your tent meets your specifications.

Your assessor/educator will judge how independently you worked as you carried out your techniques and tests, how well you made use of your time and materials, and the effort you put in.

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Assessor/Educator guidelines

# Introduction

The following guidelines are supplied to enable assessors/educators to carry out valid and consistent assessment using this internal assessment resource.

As with all assessment resources, education providers will need to follow their own quality control processes. Assessors/educators must manage authenticity for any assessment from a public source, because learners may have access to the assessment schedule or exemplar material. Using this assessment resource without modification may mean that learners' work is not authentic. The assessor/educator may need to change figures, measurements or data sources or set a different context or topic. Assessors/educators need to consider the local context in which learning is taking place and its relevance for learners.

Assessors/educators need to be very familiar with the outcome being assessed by the achievement standard. The achievement criteria and the explanatory notes contain information, definitions, and requirements that are crucial when interpreting the standard and assessing learners against it.

# Context/setting

This activity requires learners to efficiently implement advanced procedures to make a protective tent with two special features to meet a predetermined (by them or the assessor/educator) set of specifications.

# Conditions

This is an individual activity.

# Resource requirements

Learners require access to:

* a room with the necessary equipment to safely apply special features
* materials such as fabric, webbing, eyelets and thread that are needed to meet specifications
* specifications or examples that learners can refer to when creating their own
* a selection of suitable patterns
* access to a camera so that learners can take and annotate photographs to use as evidence.

# Additional information

The materials and the techniques followed must provide sufficient scope for the learner to implement advanced procedures using textiles materials to make a tent that meets specifications (or to make another negotiated product). These specifications should be short statements that describe the function of the finished product. They should not describe a particular skill or efficiency.

Useful resources include:

* Clothing construction standards: <http://aces.nmsu.edu/pubs/_c/c-214.html>
* Detailed Sewing Guide.pdf:

<http://ebookbrowse.com/detailed-sewing-guide-pdf-d30916127>

* Betzina, S 2004, *More Fabric Savvy: A Quick Resource Guide to Selecting and Sewing Fabric*, Taunton Press, United States
* Betzina, S 2010, *Power Sewing Toolbox* *1 & 2*, Taunton Press, United States
* Laflin Ahles, C 2001, *Fine Machine Sewing: Easy Ways to get the Look of Hand Finishing and Embellishing*, The Taunton Press, United States
* Copies of *Threads* magazine (or 2010 *Threads* Archive DVD-ROM):

[http://www.tauntonstore.com](http://www.tauntonstore.com/).

## Other possible contexts for this vocational pathway

Protective clothing for personal safety in industry, covers for the marine industry, upholstery for the furniture industry, sails in the sail making industry.

# Assessment schedule: Construction and Mechanical Technologies 91345 – The inside of infrastructure

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| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The learner implements advanced procedures using textile materials to make a tent with at least two special features by:* selecting and scheduling techniques to achieve special features

For example, the learner:* + trials such things as different top stitches for the window to achieve the desired strength and ventilation
	+ makes decisions and schedules the window to be made and inserted at an appropriate time
	+ receives some assessor/educator support about how and what order to carry out some of the stages of the construction, e.g. the learner was planning to add the appliqué at a stage that would have made it harder to achieve the desired finish.
* undertaking testing to monitor special feature construction to demonstrate that the tent meets specifications

For example, the learner:* + stitches on the edges of the appliquéd design but stitching is not always evenly spaced
	+ needs to be reminded about visually checking progress, stitching slowly, and adjusting the angle of the presser foot regularly; they thereafter achieved a smooth curved edge
	+ finishes the tent to meet the agreed specifications with at least two special features.
* applying scheduled techniques to comply with relevant health and safety regulations

For example:The learner follows the agreed practice for health and safety as shown on the workshop wall.*The above expected learner responses are indicative only and relate to just part of what is required.* | The learner skilfully implements advanced procedures using textile materials to make a tent with at least two special features by:* showing independence and accuracy when selecting and scheduling techniques to achieve special features

For example, the learner:* + schedules the appliquéing for after the shell of the tent has been completed, but prior to the insertion of the lining (because the learner determines that, rather than working with two layers, this would give them more control)
	+ trials, with minimum assessor/educator support, such things as different top stitches for the window to achieve the desired strength, making decisions and scheduling the window to be made and inserted after the lining has been attached.
* independently and accurately undertakes testing to monitor special feature construction to demonstrate the tent meets specifications

For example, the learner:* + visually checks progress, stitching slowly and adjusting the angle of the presser foot regularly; they achieve a smooth curved edge
	+ corrects any faults to ensure they complete a quality product to meet agreed specifications, with at least two special features, and with minimum input from the assessor/educator.
* applying scheduled techniques to comply with relevant health and safety regulations

For example:The learner knows and follows the agreed practice for health and safety as shown on the workshop wall, without prompting.*The above expected learner responses are indicative only and relate to just part of what is required.* | The learner efficiently implements advanced procedures using textile materials to make a tent with at least two special features by:* showing independence and accuracy when selecting and scheduling techniques to achieve special features, in a manner that economises time, effort and materials

For example, the learner:* + schedules the appliquéing for after the shell of the tent has been completed, but prior to the insertion of the lining (the learner determines that, rather than working with two layers, this would give them more control)
	+ trials, with minimum assessor/educator support, such things as different top stitches for the window to achieve the desired strength, making decisions and scheduling the window to be made and inserted after the lining had been attached
	+ lays out the pattern so the minimum amount of material is used
	+ stitches slowly and adjusts the angle of the presser foot regularly, saving time and effort by achieving a smooth curved edge without having to do any unpicking.
* Independently and accurately undertakes testing to monitor special feature construction to demonstrate that the tent meets specifications, in a manner that economises time, effort and materials

For example the learner:* + spends little or no time repeating techniques as they confidently use the correct technique in the first place, e.g. pattern layouts are visually checked before cutting and the minimum amount of material is used
	+ visually checks progress on own initiative, thus avoiding having to re-do features
	+ stitches slowly and adjusts the angle of the presser foot regularly; consequently saves time and effort by achieving a smooth curved edge without having to do any unpicking
	+ carries out performance tests on stitching and any faults are quickly corrected to ensure a quality product that meets the agreed specifications is completed within the agreed time frame; the tent has at least two special features, and was made with minimum input from the assessor/educator.
* applying scheduled techniques to comply with relevant health and safety regulations

For example:The learner knows and follows the agreed codes of practice for health and safety without prompting.*The above expected learner responses are indicative only and relate to just part of what is required.* |

Final grades will be decided using professional judgement based on an examination of the evidence provided against the criteria in the Achievement Standard. Judgements should be holistic, rather than based on a checklist approach.