

Assessment support pack

FSKNUM016 Interpret, draw and construct routine 2D and 3D shapes for work

Release 1

Aspire Version 1.1



About this resource

This resource is for trainers and assessors of the unit *FSKNUM016 Interpret, draw and construct routine 2D and 3D shapes for work*. It complements the corresponding Aspire *Learner guide*.

The *Assessment support pack* provides you with ideas and guidance on encouraging and supporting students through the training and assessment process using Aspire resources. It is designed to help you optimise the student's experience and record details of their competency.

This resource is comprised of several folders with the following editable documents to assist trainers and assessors.

Folders	Documents
Introduction	Introduction
Formative assessment	Formative assessment guide
Summative assessment	Final assessment marking guide Student assessment Third-party report
Supporting documents*	Sample documents and templates
Mapping	Contains formative and summative mapping
PowerPoint	PowerPoint slides for training purposes

*The supporting documents folder is inside the summative assessment folder.

Key features

- The *Assessment support pack* complements the Aspire *Learner guide*.
- It includes weblinks to the relevant unit of competency and other support resources.
- Provides guidelines for trainers and assessors on their responsibilities for formative and summative assessment to meet VET requirements.

Formative assessment

- Includes Learning checkpoint questions with a marking guide.
- Discussion topics provide trainers with a guide to engage with students about the learning content.
- Clearly maps the learning content to the unit of competency requirements in a customisable Excel spreadsheet.

Final assessment

- Includes detailed instructions to assessors on each assessment task.
- Includes a marking guide for each final assessment task.
- Clearly maps the final assessments to the unit of competency requirements.
- Mapping is provided in an Excel spreadsheet that allows you to customise and adjust as necessary.

Formative assessment guide

FSKNUM016 Interpret, draw and construct routine 2D and 3D shapes for work

Release 1

This resource is for assessors. It complements the corresponding Aspire *Learner guide* for this unit.

Aspire provides questions in its learner guides. Questions are divided into practice tasks, which appear throughout the learning content, and learning checkpoints, which appear at the end of each topic.

This *Formative assessment guide* replicates these questions, and provides solutions and suggested responses.

Assessment task 1: Questions

You will be asked to complete questions on what you have learnt. Answer all questions in the spaces provided.

This is an open-book task. You can use a learner guide and the internet. You can also ask your assessor to assist you if required.

Evidence

Your assessor will tell you how to submit your answers. Give your answers and a completed cover sheet to the assessor. Keep a copy of your work.

When and where will this assessment take place?

Your assessor will tell you when and where to do the assessment.

There is no time limit to complete the assessment.

What if the assessment is not suitable?

If you cannot respond to the questions in writing, discuss this with your assessor. You may be asked to answer the questions another way, such as saying your answers out loud.

What if answers are not satisfactory?

If any of your answers are unsatisfactory, your assessor will give you feedback. You may need to redo some of your answers. Your assessor will explain how to do this.

If you are not happy with your assessment result, discuss this with your assessor.

Assessment task 2: Project

You will be asked to complete a project on what you have learnt. Read and respond to the project instructions.

This is an open-book task. You can use a learner guide and the internet. You can also ask your assessor to assist you if required.

Required resources

Your assessor will provide you with the following to complete the project:

- Geometric instruments utilised in the performance evidence.

Evidence

Your assessor will tell you how to submit your answers. Give your answers and a completed cover sheet to the assessor. Keep a copy of your work.

If you do the project in a workplace, your supervisor may need to complete a third-party report. Your assessor will discuss this with you and your employer.

When and where will this assessment take place?

Your assessor will tell you when and where to do the assessment.

What if the assessment is not suitable?

If you cannot complete the project in writing, discuss this with your assessor. You may be asked to complete a different project.

What if responses are not satisfactory?

If any of your responses are unsatisfactory, your assessor will give you feedback. You may need to redo some of your responses. Your assessor will explain how to do this.

If you are not happy with your assessment result, discuss this with your assessor.

Project instructions

Section 1: Interpreting shapes and angles

Write a report identifying how shapes and angles are used in a workplace task or in an instruction document such as a manual or job sheet.

1. Select four (4) different 2D and 3D shapes and describe how they are used in the task or text.
2. Compare the properties of each 2D and 3D shape.
3. Describe how each of these four (4) angles are used in the task or text: 360° , 180° , 90° and 45° .
4. Compare the properties of angles and estimate the type or degree of the angle.

Section 2: Completing a workplace task

Record the mathematical processes you used to complete a workplace task such as drawing or constructing shapes.

You will need to describe how the properties of the following five (5) shapes were applied in the workplace such as in an instruction document to complete a task:

- Rectangular prisms
 - Cubes
 - Pyramids
 - Spheres
 - Cylinders
5. Select a mathematical process to complete the task
 6. Select a mathematical process to complete the task.

Assessment task 3: Observation

By correctly completing the observation, the student will demonstrate that they have the required skills and knowledge to interpret, draw and construct routine 2D and 3D shapes for work

If any part of the assessment will be conducted in the student's workplace, you must first discuss this with the student's employer.

Students need access to the *Student assessment* or learning management system to complete the observation as well as a learner guide, the internet and/or other resources.

Students must satisfactorily respond to each section of the observation, including all parts within each section.

Supporting documents

Aspire has provided the following supporting documents that students can refer to and/or use as evidence:

- Third party report

Evidence

Students need to submit a completed assessment task cover sheet as well as the following items.

Required evidence*

- ☐ Completed observation checklist
- ☐ Third-party report (if applicable)

*You may need to add or remove items as necessary.

Students need to submit their evidence by handing in physical copies or by sending in electronic copies via email or online submission. Advise students on how they are to submit their responses, and to keep a copy of their submitted work.

If components of this assessment are undertaken in a workplace, a third-party report may need to be completed by a supervisor. You may need to provide them with a copy of the observation marking guide. Discuss this with the student's employer, if relevant.

Video or photo evidence may be suitable for some parts of the assessment task. You will need to discuss the appropriate method for collecting and submitting this evidence, if relevant.

When and where will this assessment take place?

This observation may be undertaken in a simulated environment or a vocational training context.

Observation marking guide

Discuss with your supervisor or trainer how shapes and angles are used in the workplace. This includes discussing each of the following angles:

- 360°
- 180°
- 90°
- 45°

It also includes discussing the following 3D shapes:

- Rectangular prisms
- Cubes
- Pyramids
- Spheres
- Cylinders

In your discussion, use formal and informal language to describe the problem-solving processes used to achieve your final results.

During the observation, the student demonstrated the following:

1. Describe the properties and applications of each of the shapes and angles used in the workplace.

This may include:

- Describing the task or activity and the problem to be solved
- Talking about the features and properties of shapes angles (e.g. the sides, edges, corners, vertices, surfaces or faces of each shape)
- Comparing the features of 2D and 3D shapes (e.g. 2D are flat and 3D are solid)
- Describing how the area was calculated (e.g. $\text{Area} = \frac{1}{2} (\text{Base} \times \text{Height})$)
- Using the correct abbreviation that represents a measurement that is squared: ²
- Describing how the perimeter was calculated
- Identifying different angles (e.g. 360°, 180°, 90° and 45°)
- Discussing the names of different degrees and equivalent numerical representations (e.g. acute, right, straight, obtuse and reflex)
- Showing how geometric tools were used correctly and safely. For example, how a:
 - compass measures a circle
 - protractor measures an angle
 - ruler measures length.
- Explaining how software was used to assist and determine the result.
- Explaining how the net was designed using the geometric software
- discussing the initial designs before the result was achieved
- using informal and formal language to describe shapes. For example:
 - Formal: draw to scale, measure length, what is the ratio
 - Informally: free hand, imagine, like
- Using informal and formal spoken language to describe angles. For example:
 - Formal: place the vertex, right angle, use the
 - Informally: draw a line, guess the, about

Third party to complete

Third-party checklist

During the period of observation, I observed the student consistently and repeatedly demonstrating these skills to the required work standard.	Observation date/s:	
	O	N
<p>1. Describe the properties and applications of each of the shapes and angles used in the workplace. In their discussion, they must use informal language (such as 'drawing free-hand a large shape') and formal language (such as 'draw to scale or calculate the area of a solid').</p> <p>Outline of the task:</p> <ul style="list-style-type: none"> Talk about the features and properties of shapes angles (e.g. the sides, edges, angles, corners, vertices, surfaces or faces of each shape). Compare the features of 2D and 3D shapes (e.g. 2D are flat and 3D are solid). Describe how the area was calculated [e.g. Area = $\frac{1}{2}$ (Base x Height)] and use the correct abbreviation that signifies a number is squared: 2. Describe how the perimeter was calculated. Identify different angles (e.g. 360°, 180°, 90° and 45°) Discuss the names of different degrees and their equivalent numerical representation (e.g. acute, right, straight, obtuse and reflex angles). Explain how software was used to achieve the final result. Explain how the net was designed using geometric software. Discuss the initial plan or draft and the various designs before a final result was achieved. Use informal and formal language to describe shapes; for example: <ul style="list-style-type: none"> Formal: draw to scale, measure length, what is the ratio Informally: free hand, imagine, like Use informal and formal spoken language to describe angles; for example: <ul style="list-style-type: none"> Formal: place the vertex, right angle, use the Informally: draw a line, guess the, about Show and discuss the various designs used before a result was achieved. Talk about initial plan of design informally Other (please describe): <p>Comments:</p>	<input type="checkbox"/>	<input type="checkbox"/>
Feedback/overall comment:		

O = Observed N = Not observed