Sample assessment task

Year level	5
Learning area	Mathematics
Subject	Shape
Title of task	3D object models and poster

Task details

Description of task	Students will create a model of two three-dimensional objects. They will then create a poster to demonstrate the connection between three-dimensional objects and their two-dimensional representations.
Type of assessment	Summative
Purpose of assessment	To assess students' understanding of the connection between three-dimensional objects and their two-dimensional representations.
Assessment strategy	Visual
Evidence to be collected	Poster and Models
Suggested time	1 hour

Content description

Content from the Western Australian Curriculum	**Measurement and Geometry** **Shape** Connect three-dimensional objects with their nets and other two-dimensional representations			
Proficiencies	Understanding	Fluency	Reasoning	Problem Solving
	✓	✓	✓	✓

Task preparation

Prior learning	Students have prior knowledge of: • two-dimensional shapes.
Assessment differentiation	Teachers should differentiate their teaching and assessment to meet the specific learning needs of their students, based on their level of readiness to learn and their need to be challenged. Where appropriate, teachers may either scaffold or extend the scope of the assessment tasks.

Assessment task

Assessment conditions	This is an individual, in-class assessment.
Resources	• Models: paper, straws, plasticine/play dough/clay, construction paper, isometric paper, cardboard, scissors, glue, sticky tape, graph paper etc • Writing materials

Instructions for teacher

It is recommended in this task that students complete all the information for one three-dimensional object at a time so they can be assessed on their full knowledge. It is hoped that they will complete the task with at least two different types of 3-D objects. Some students may draw nets and create their models from there and others may try to stick shapes together. It is at this time that you will be able to gain a great deal of information about the students' understanding of three-dimensional objects.

Instruct students that they will have a range of materials to choose from to create their models. There are two parts to this task:

1. models – two three-dimensional shapes
2. poster.

Students will be creating two models of different three-dimensional shapes and then use their knowledge of these shapes to create a poster that demonstrates their understanding. Their poster must include:

- a drawing of the two three-dimensional objects with the key geometric features clearly labelled
- a drawing of the 'nets' of the three-dimensional shapes
- a list of the two-dimensional shapes that make up each object
- a picture or photo of the objects within the environment
- a photo of the models created by the student
- any additional information about the three-dimensional objects.

Instructions to students

You will be completing a task with two parts, consisting of:

1. three-dimensional models (two different shapes)
2. poster.

1. **Three-dimensional model**
   Select the most appropriate materials to create your three-dimensional models. Ensure they are stuck together securely. Remember to include all the properties of your shapes.
2. **Poster**
   Create a poster using your knowledge of three-dimensional shapes. Your poster must include the following:
   - a drawing of the three-dimensional objects with the key geometric features clearly labelled
   - a drawing of the 'nets' of the three-dimensional shapes
   - a list of the two-dimensional shapes that make up each object
   - a picture or photo of the objects within the environment
   - a photo of the models created by the student
   - any additional information about the three-dimensional objects.

Sample marking key

Description	Marks
1. Models – two three-dimensional shapes	
Uses a correctly hand-drawn net to assist in the creation of two three-dimensional models. Models are structurally sound and contain all properties of chosen three-dimensional shapes.	3
May use a hand-drawn net to assist in the creation of two three-dimensional models. Models are mostly structurally sound and contain most properties of chosen three-dimensional shapes.	2
Sticks shapes together to create two three-dimensional models. Models may be inaccurate, structurally unsound and not contain all properties of chosen three-dimensional shapes.	1
Subtotal	**3**
Description	**Marks**
2. Poster	
Includes all required elements in poster, correctly labels all geometric features of two-dimensional and three-dimensional shapes (including those that may be hidden or cross-sections) and uses correct mathematical terminology.	3
Includes most required elements in poster, labels some geometric features of two-dimensional and three-dimensional shapes (including those that may be hidden) and uses mostly correct mathematical terminology.	2
Includes some required elements in poster, labels some geometric features of two-dimensional and three-dimensional shapes with some inconsistencies and uses a mixture of mathematical and everyday terminology.	1
Subtotal	**3**
Total	**6**