

Curriculum links

Year 9 Maths

- Calculate the areas of composite shapes (VCMMG312)
- Calculate the surface area and volume of cylinders and solve related problems (VCMMG313)
- Solve problems involving the surface area and volume of right prisms (VCMMG314)

VCAL Numeracy (senior skills)

Planning and Organising

- Applying mathematics
 - Apply problem-solving techniques to solve multi-step numerical problems related to planning and organisation.
- Writing and interpreting numerical expressions
 - Use distance, direction, coordinates, simple scales, labels, symbols and keys to read and use everyday maps and plans.

Measurement, Representation and Design

- Mathematical knowledge and techniques
 - Describe, name and represent common two-dimensional shapes and three-dimensional objects.
 - Create detailed plans and diagrams representing familiar real-world objects.

Learning intention and success criteria

Learning intention

- To use area, volume and rate calculation to solve a problem.

Success criteria

- Draw shapes based information provided on other diagrams and tables.
- Calculate area of 2-D shapes.
- Calculate volume of 3-D shapes.
- Apply rates to volumes to calculate cost.

Instructions to teachers

This activity has been developed as a problem solving task for students that have a sound understanding of area and volume. Students also need to apply rates to volumes calculated.

The worksheet that students complete is a word document that has been designed using the developer function. This means that students can save the document to their device and are able to modify certain sections to record their answers. Although students are able to quickly adapt to this format, it is recommended that you briefly familiarise yourself with the document before you distribute it to students.

Answers including working out have been provided to you to make feedback to students easier.

Instructions for students

1. Download the activity, save to your device and then select view and select edit document.
2. Complete the activity and resave to your device.
3. Submit the task with a photo of your working out to your teacher for feedback.