

# Solve problems involving the surface area and volume of composite...

solve problems involving the surface area and volume of composite objects using appropriate units

## Learning intention

- solve problems involving the surface area and volume of composite objects using appropriate units

## Teach and model

- determining the volumes and surface areas of composite solids, formed from a range of right prisms and cylinders, by considering the individual solids from which they are...
- estimating the surface area and volume of composite objects in practical contexts
- using mathematical modelling to provide solutions to problems involving surface area and volume; for example, ascertaining the rainfall that can be saved from a roof top...

## Check understanding

- Explain the main idea in solve problems involving the surface area and volume of composite... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

## Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

## Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.