Cylinders are used extensively in society. Why do you think cylinders are so commonly used for packaging?

What you will need:
- paper, pen or pencil
- measuring tape
- examples of cylinders.

What to do:
1. Collect 4 – 5 different examples of cylinders at home.
2. Measure the cylinders and for each, calculate:
   a. Volume - for cylinders Volume = \( \pi r^2 h \) (\( r \) is the radius and \( h \) is the height).
   b. Surface area (SA) - for cylinders \( SA = 2\pi r^2 + 2\pi rh \) (\( r \) is the radius and \( h \) is the height).
3. What do you notice? Does the cylinder with the greatest volume also have the same surface area?

Taking the learning further:
4. Determine whether it is possible for a cylinder to have the same value of surface area as its volume?

What learning is happening:
- accurately measuring a cylinder and determining which attributes to measure
- understanding how the radius, diameter and circumference of a circle are related is central to realising the importance of pi (\( \pi \))
- applying measurement formula is an important skill used in many situations.
Links to more information:

- Learning at home\(^1\) on the Department of Education website.

\(^1\) www.education.tas.gov.au/parents-carers/learning-at-home/