# Surface area vs Volume

In this activity you will investigate the volume of objects that have the same surface area.

## Task 1 – the experiment

1. Take an A4 piece of paper in landscape orientation and fold it to form a cylinder.

 

1. Stick your cylinder together, being careful not to overlap the edges by too much.
2. Stand your cylinder on a table and carefully fill it with rice or something similar.
3. Measure how much rice it took to fill the cylinder.
4. Take a second sheet of A4 paper in portrait orientation and fold it to form a tall, skinny cylinder.

 

1. Again, stick your cylinder together, being careful not to overlap the edges by too much.
2. Stand your cylinder on a table and carefully fill it with rice, as before.
3. How much rice did it take to fill this cylinder?

## Task 2 – analysing the experiment

These two cylinders have the same surface area because they are made from the same sized piece of paper.

1. What did you notice about their volumes?
2. Repeat the experiment with a different sized piece of paper (maybe cut your A4 sheet in half).
3. What did you notice this time?