String along

Maths Ages 14-16

> A new ball of string will claim a total length on its wrapper, so why not hide the wrapper and ask pupils to estimate how much there is?

You don't want to have to unwind the whole thing and measure it bit by bit and then wind it up again – tedious and messy – so get them guessing.

Once everyone has had a go, groups of pupils can work on ways of refining their estimates. Different methods may be offered. For example, someone might want to cut off a certain length and weigh it and then weigh the whole ball.

Others might try to measure the thickness of the string and the dimensions of the ball and do some volume calculations. Some might try counting the lines of string around the edges to work out how many layers there are. Whose estimates are the best?

You can do a similar task with a roll of toilet paper or stack of paper

Colin Foster teaches maths at King Henry VIII School in Coventry