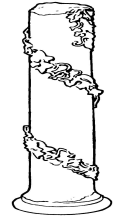# Science: KS2
How tall is that tree?

Work out the height of a tree in 4 different ways!

You will need: A tape measure, pencil, clipboard, calculator and piece of paper.

How to do it: Work in pairs for each method.

1. **Estimate the height:** Measure the height of your partner. Ask your partner to stand next to the tree. Look carefully - how many times might your partner fit into the height of that tree? Swap over and see if you get the same answer.

2. **Use a pencil!** One person stands by the tree. The other carefully walks away from your tree. Turn around every few feet. Hold your pencil vertically and hold it up to the tree. Line up the bottom of your pencil with the bottom of the tree and the top of your pencil with the top of the tree. You may need to walk away quite a distance until this works. Now turn your pencil to a horizontal position, with the end of it still at the base of the tree. The child by the tree walks away at a right angle to head for the point of the pencil. **Shout Stop!** When your partner reaches the end of your pencil. Mark this spot. The distance from this mark to the base of the tree is the height of the tree! How tall is it in meters?

3. **Look through your legs!** Choose a tree. Walk away from it but every so often stop, bend forward and look between your legs at the tree. When you can just see the top of the tree, ask your partner to stand on that spot and measure the distance from that spot to the base of the tree. That will be the height of your tree.

4. **Use a metre stick:** Both of you stand up against the trunk of your tree. One of your walk 30 steps away from it, if you can. Then, lie down and look up at the top of the tree. Your partner then walks 27 steps away from the tree and holds up a meter stick. They move their finger up and down the stick until the child lying down can see it is in line with the top of the tree. The height of the tree will be 10 times the height of the mark on the stick.