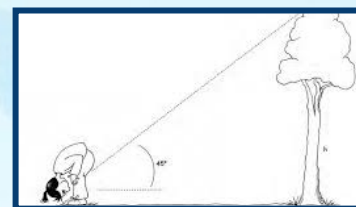




How Tall is a Tree?



The Task

Find out the height of a tree and work out its age. Link this age to moments in history.

How?

- Stand with your legs apart and your back to the tree. Keeping your legs straight, bend down and look at the tree between your legs.
- Move backwards or forwards so that you can just about see the top of the tree between your legs.
- Measure the distance between your feet and the tree trunk. When you can see the top of the tree between your legs, the distance between your feet and the trunk is about the same height as the tree.
- Think about how you will measure the distance between your feet and the tree. You could ask a friend to count strides or heel-to-toe steps between you and the tree trunk or use a measuring device.
- Measure up the trunk 1.5m from the ground and wrap a tape measure around, to find out the circumference.
- Divide this figure by the growth rate to discover an approximate age of the tree.

Considerations

- To calculate the age of the tree you will need to know the type of tree (see additional links). Divide the circumference of your chosen tree by one of the following figures.
- 1.88 for oak; 2.50 for hazel; ash and beech 2.75; sycamore 3.13;
- If you can't identify the tree or is not on the list, divide by 2.5

What will you need?

- A tree
- Tape measure
- Paper and pencil
- Calculator or good mental maths





How tall is a tree?

Organisation & Layout

- This can be run in the school ground or a park where there are trees.
- Best done in groups of two or three.

Learning Objectives

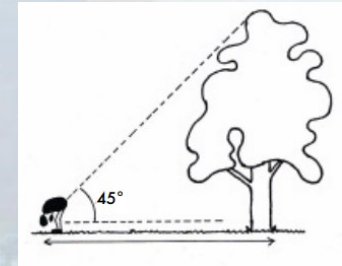
- Aimed at the second level of Curriculum for Excellence (about 8 to 11 years old).
- Develop children's skills in estimating and measurement (measuring to the nearest cm).
- Carrying out calculations using decimals and introducing angles.
- Measuring tree height and calculate a tree's age from its girth (circumference).

Safety Information

- Make sure the working area is well defined and students know which trees they are to measure.
- Set a time for return or use a whistle or air horn.
- There is no need to climb the trees (although it is good fun!).
- Don't damage the trees or leave litter.

Review & Assessment

- Why/how does this work?
- Do different groups get the same results when they measure the same tree?
- Can they name any historical events from when the tree was planted or may have witnessed during its life?



Additional Links & Support

[Blairvadach How to measure the height of a tree BASIC—YouTube](#)

[Blairvadach How to measure the height of a tree ADVANCED—YouTube](#)

