



Activity title

Put a Ring on It

Time required

1 hour

Activity summary

Measuring the circumference of tree trunks and working out their age

By the end of this activity, you will be able to:

Measure the circumference of a tree and calculate its age using its circumference.

What equipment will you need?

Measuring tape, pencil, paper, clipboard and a calculator.

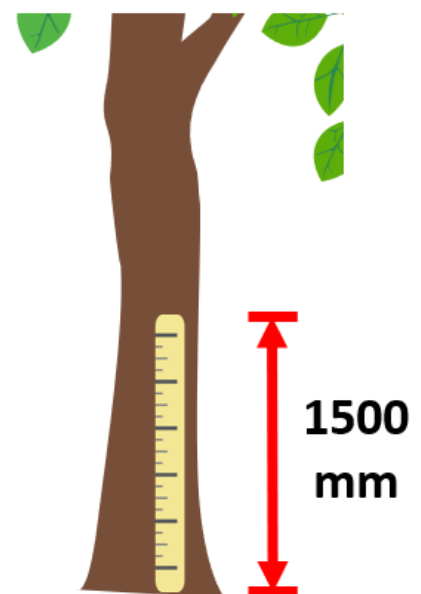
How to do it

Trees are an important part of our natural environment. This activity will show you how to measure the circumference of a tree trunk. You will use this measurement to calculate the age of the tree in years.

Now try this

1. Finding the height of 1500 mm

- Identify a tree that you are going to measure.
- Place the end of the measuring tape (0 mm) at the base of the trunk.
- Measure upwards to find the point where the trunk is roughly 1500 mm high.

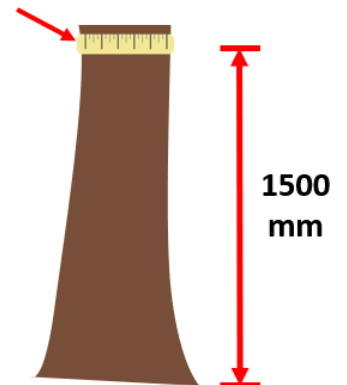


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2. Measuring the circumference of tree

- Place the end of the measuring tape (0 mm) at any point on the tree trunk at the height of 1500 mm.
- Wrap the measuring tape around the trunk, holding the end in place.
- At the point where the tape meets the end again, read the measurement in mm. This is the circumference of the tree.

Circumference measurement



3. Work out the age of the tree

- Write down the measurement of the circumference of the tree in mm in the table below.
- Every 25 mm is one year's growth. So, divide your measurement by 25 to find the age of the tree.

Measurement, mm	Age, years



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For an example of how to work out the age of a tree:

1. Monumental trees – How to measure tree circumference:

Explanation with diagrams showing how to measure the circumference of different trees.

<https://www.monumentaltrees.com/en/content/measuringcircumference/>

2. Tree-guide – Tree age calculator:

Online calculator for working out the age of different types of tree.

<http://www.tree-guide.com/tree-age-calculator>

You could also...

1. Calculate the ages of several different trees and work out the mean average.
2. Convert the values measured in mm into cm and m.

Further activities you could carry out

Identify the main parts of a tree and explain their function

For some examples of how trees age and change through the seasons:

Bitesize class clips - The lifecycle and inhabitants of an oak tree: Videos showing how an oak tree ages and changes through the seasons.

<https://www.bbc.co.uk/bitesize/clips/z6bvr82>



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What results were expected?

For example, an Oak tree with a circumference measurement of 1000 mm is approximately 40 years old:

Circumference of tree divided by 25 = age of tree

$$\frac{1000}{25} = 40 \text{ years old}$$

