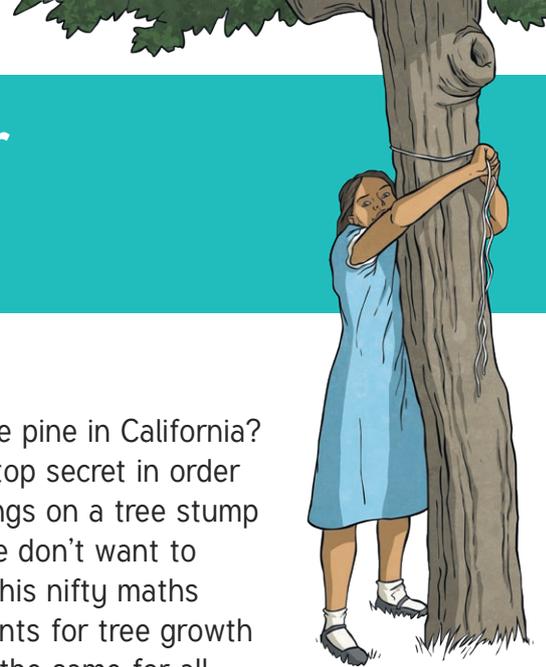




Take it Outside: Summer

Calculate the Age of a Tree



Introduction

Did you know, the oldest living tree is a bristlecone pine in California? It is almost 5000 years old! The exact location is top secret in order to protect it. You might know that counting the rings on a tree stump will give you the approximate age of a tree, but we don't want to cut down trees to find out how old they are! Try this nifty maths investigation instead. Please note: the measurements for tree growth mentioned here are an approximation and are not the same for all species of tree.

You will need:

- a metre stick;
- a tape measure;
- a calculator.

Key Questions

- Can you estimate a tree's age just by looking at it? How?
- What makes the rings on a tree stump? (A new layer of bark grows each year.)
- Who found the youngest/oldest tree?
- Why is it important to preserve trees?

What to do:

1. Do you know the difference between deciduous and evergreen trees? Find a deciduous tree in your school grounds.
2. First, face the trunk and measure 1.3m from the ground. This is the point at which you need to measure the circumference of the trunk.
3. At 1.3m from the ground, use a tape measure to measure the circumference of the trunk, in centimetres. Make sure you avoid any lumps or branches.
4. To get an approximate age for the tree, convert the measurement of the circumference in centimetres, to inches. Here is an example of the calculation:

$$1 \text{ inch} = 2.5 \text{ cm}$$

$$\text{Tree circumference} = 110 \text{ cm}$$

$$\text{Calculation} = 110 \div 2.5 = 44$$

$$\text{Age of tree} = 44 \text{ years!}$$



5. Explore your school grounds and map the trees you can age. Where is the oldest? Where is the youngest?

Ways to Support

Work in mixed-ability or adult-led groups to support with the calculation. Revisit how to make an accurate measurement.

Ways to Extend

Create a tree log book. Identify the tree, calculate its age and gather other information, such as leaf shape.

Curriculum Links

Maths: Convert between different units of measure; measure in centimetres; make calculations involving division.