Measuring a Tree Activity

This fun activity can help work out the age of a tree but it does not apply to all trees.

Each year, the tree forms new cells, arranged in concentric circles called annual rings or annual growth rings. These annual rings show the amount of wood produced during one growing season.

You will need -

A measuring tape

A ball of String

A Tree , do you know what species?

Paper and Pencil to write down the measurements.

A calculator

How -

Find a Tree that is at least 5 feet tall

Wrap a piece of string around the widest part of the tree and make a mark on the string.

Measure the string using the measuring tape and write it down.

Divide the measurement by the species of tree

For example

Oak Tree = 130cm (130 ÷ 1.88 = 69.15) 69 years old

My tree is a …………………………………………………………

It measures ……………………………………………………

………………….. ÷ ………………… = ……………………….

My tree is …………………………………….. **years old**

How old is a tree?

Look at a variety of trees in the park and ask which trees the group think are the oldest and why? Would they have been here 200 years ago?

(Older trees will tend to be taller, larger and with wider trunks.)

If a log/cut stump of a tree trunk is available the group can count the annual rings. It is, however, sometimes quite hard to see all the rings, particularly if they are very close together – so it may need to a rough estimate.

The girth of a living tree can be used to estimate its age. The group can use a tape measure or piece of string, to measure around the trunk at approximately a child's head height (about 1 metre from the ground) – measure to the nearest centimetre. This is the girth or circumference of the tree.

Roughly, every 2.5cm of girth represents about one year's growth. So to estimate the age of a living tree, divide the girth by 2.5. For example a tree with a girth of 40cm will be sixteen years old.

Take your tape or string and measure some of the trees in the local area.

Which are the oldest? Which are the youngest? You could then turn this information into a timeline, tree map or chart.

If you know the species of tree you are measuring, you can make this work more accurate, as different types of tree grow at different speeds. Look up the type of tree you have measured in the table and divide the girth by the number given. For example a sycamore with a girth of 110cm is about 40 years old ($110 \div 2.75 = 40$)

Species of tree	Growth of girth per year (cm)
Oak and beech	1.88 cm
Pine and spruce	3.13 cm
Sycamore	2.75 cm
Average	2.5 cm