



Log Circle Challenge (Summer 2009)

A log circle has been installed on the Meadow. You can find it just beside the great oak tree, about half-way up the Meadow.

If you look at the top of the logs in the circle, you can see a series of rings, each inside another. Each ring represents one year of that tree's life.

Count logs clockwise, the log shown in the picture below being no.1.



Question 1: Can you work out which is the oldest log in our circle?

The rings nearest the centre are the oldest and those closest to the bark are the most recent.

The oldest log is log no. _____

It is _____ years old



Fun fact: you can tell the age of a tree without cutting it down!

Try this: measure the girth (the distance around the tree) at about 1.5m above the ground, then apply one of the following rules:

- If the tree is surrounded by other trees (meaning it does not have sufficient light), every 12mm of girth equals a year's growth; or,
- If the tree is standing alone with plenty of sunshine, every 25mm of girth is equal to a year's growth.

Question 2: Can you work out how old the great Oak tree next to the log circle is?

I think the great Oak tree is _____ years old.

There is much more to the tree rings than simply using them to work out the age of a tree. Look closely and you will see that the thickness of each ring is different: some are wider, some are narrower. The rings tell you a lot about the life history of the tree and the environment it lived in:

- A hot, dry summer, for example, will limit growth that year, producing a narrow ring; while a warm, wet summer will allow the tree to grow faster, producing a wider ring;
- Rings closer to the centre are generally wider because the tree is more vigorous in youth; while rings closer to the bark are narrower because the growth of a tree slows down in later years;
- A sudden increase in ring thickness in later years usually indicates that the tree had better access to light - This may happen because of the thinning (selective cutting down) of woodland near to it;
- Often you can tell which side of the log was facing north when the tree was growing: the portion of each tree ring on that side is generally narrower.

Have a look at the logs' rings more closely - Can you see any of those features?

For Younger Detectives:

Question 1: How many logs are in the circle? My answer is _____ logs.

Question 2: How many logs came from a birch tree? My answer is _____ logs.



Birch Bark looks like this:

*Return this to the library, or send the answers by email to:
Detectives@WhitchurchMeadow.org.uk*

Visit our website at <http://WhitchurchMeadow.org.uk>

My name is _____,

I am _____ years old.



Whitchurch Millennium Green Trust