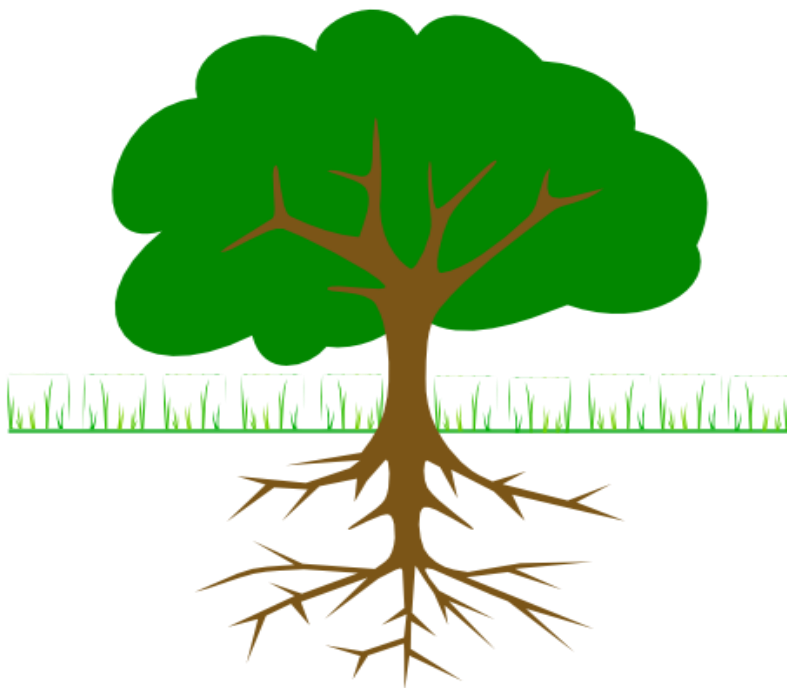


WOODY WONDERS  
TREE and LEAF  
ACTIVITIES  
and  
WORKSHEETS



GROW WITH US

## TREE ACTIVITIES

KS1/ KS2

Tree Activity 1

### MEASURING AROUND A TREE

Curricular Links: Numeracy  
Time : 10 minutes.  
Equipment: Large tape measure.(not needed for KS1 )  
Place: Ornamental Lawns(Area 21 on map)  
School term: Any

Instructions:

Choose a tree with a large trunk.  
Ask how many children holding hands could reach round it?  
Estimate, number of children before trying.  
Line the children up side by side and see long it is – estimate the length.  
Use the tape measure. Estimate in cms or metres

Please note – If tree is surrounded by soil or flower bed do not tread near tree.

Name

Date

Measuring around a tree

My estimate is \_\_\_\_\_ children

Actual number of children is \_\_\_\_\_

Measured width of tree in centimetres \_\_\_\_\_

in metres \_\_\_\_\_



## TREE ACTIVITIES

KS1/KS2

### Tree Activity 2

#### TREE HEIGHT MEASURING

Curricular Links: Numeracy  
Time: 15-30 minutes  
Equipment: Notebook and pencil, measuring tape.  
Place: Any suitable tree  
School Term: Any

**Instructions:** Stand with backs to the tree and legs apart .

Bend down and look at the tree between your legs. Keep legs straight.

Move either backwards or forwards, adjusting distance until able see the top of the tree between their legs.

*(When they can see the top of the tree between their legs, the distance between where they are standing and the trunk of the tree is about the same height as the tree.)*

How they will measure the distance between their feet and the tree?

Choices: count strides or number of foot steps between feet and the tree trunk or use a tape measure.

Which will be the most accurate?

Can they think of any other ways?

## Activity 2

### Tree Height Measuring

How does this method work?

This method works because the angle of sight, from the eyes when looking between the legs (when you can only just see the top of the tree) to the top of the tree is approximately 45 degrees.

The angle of the tree with the ground is usually 90 degrees (right angle). An approximate isosceles triangle is then formed. This means that the distance between your feet and the tree trunk is approximately the same as the height of the tree.

Name

Date

MEASURING HEIGHT OF TREE

My estimate is \_\_\_\_\_

I measured the distance from my feet to tree by

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Actual measurement in \_\_\_\_\_

Actual measurement in metre and cms or cms \_\_\_\_\_

My estimation was close  
over  
under

I chose to measure distance in \_\_\_\_\_ because

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## TREE ACTIVITIES

### Tree Activity 3

Suitable for YR 5/6

#### TREE MEASURING USING A CLINOMETER.

N.B. This activity needs preparation before visit

Curricular Links:	Numeracy
Time:	Approximately 30 minutes
Place:	Any appropriate tree
School Term:	Any
Instructions:	You will need:

A square piece of card  
A drinking straw  
A length of string  
Sellotape  
A weight (e.g. piece of plasticine)

What you do:

Fold the card to form an isosceles triangle. (2 sides of equal length, a 90 degree angle and two 45 degree angles.)

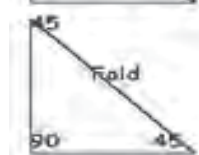
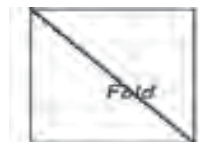
Tape the drinking straw along the long edge of the triangle.

The straw will be used as a sight.

At the upper end of the long fold attach the string.

Tie a weight to the other end of the string making it long enough so that the weight dangles a few inches below the corner.

Using the clinometer



Work in pairs.

One partner looks up through the straw to sight the top of the tree, while the other partner guides and tells them when the string is hanging straight down, (i.e. parallel to the edge of the card).

When the partner sighting through the clinometer can see the top of the tree with the string hanging straight down they are as far away from the tree as the tree is high.

They can now simply measure the distance from where they are to base of the tree. Either count number of footsteps, (footsteps can be measured either in cms or mts. to give a more accurate measured length) or use a tape measure

Or

Visit [www.foresteducation.org](http://www.foresteducation.org) for instructions how to make and use an easily made clinometer



## LEAVES

Leaf Collection KS1, KS2.

Curricular Links:

Science, Numeracy and Literacy

Time:

As long or as short as you like!

Place:

Ornamental lawns (Area 21 on map).

Equipment:

Bags to collect leaves

School Term:

Autumn/Spring

Instruction:

This as a simple but enjoyable activity.

As you collect observe each leaf.

Ask questions : Can they identify the type of tree by the shape an size?

If they are collecting leaves what does it tell them about the season?

What does it tell them about the type of tree?

Evergreen or deciduous



## LEAVES

Leaf Collection KS1, lower KS2.

Leaf Games  
Observational skills

Curricular Links: Science, Numeracy and Literacy  
Time: 15-30 minutes  
Place: Ornamental lawns (Area 21 on map).  
Equipment: Leaves  
School Term: Autumn/Spring

Instructions:  
Allow children to enjoy observing either a leaf or collection of leaves.

Individual Game sitting in a circle with teacher in the middle,

Team game Sit in two teams.

Teacher asks for specific leaves. e.g.  
Has anyone got an oak leaf?  
Has anyone got a leaf with a curly edge?  
Has anyone got an evergreen leaf?  
Etc. etc.

Scoring  
Child takes leaf to teacher and gains a point.  
Team game , first child to teacher with correct leaf gains point for their team.

## TREE ACTIVITIES

Leaf Collection KS1, KS2.

Curricular Links: Science, Numeracy and Literacy

### **Leaf I-spy .**

Time: Set own time limit

Place: Ornamental lawns (Area 21 on map).

Equipment: Worksheet and pencil

School Term: Any,

Instructions: Search for the leaves of different shapes, textures and colours.

See worksheet below

**Leaf I-spy**



**HORSECHESTNUT**



**ASH**



**HOLLY**



**BEECH**



**OAK**



**LIME**



**SILVERBIRCH**



**SYCAMORE**

**GROW WITH US**

Leaf Collection KS2.

### **Maths Investigation**

**'Do all oak leaves have the same number of lobes?'**

Curricular Links: Science, Numeracy and Literacy

Time: 30 minutes +  
Place: Ornamental lawns (Area 21 on map).  
Equipment: Collection of oak leaves, pencil, notebooks, graph paper  
School Term: Autumn/Spring

Instruction:

1. Divide leaves up between groups of children .
2. Make a pictogram using the leaves or draw a graph showing number of lobes on each leaf.
3. Older children can write questions to be answered from the graph.

## **Scavenger Hunt**

A shiny green leaf

A leaf green on one side, white on the other side

A leaf with one point

A leaf with sharp prickles

A feather,

A nut

A berry

A twig covered in moss

Fallen pine needles

Three different colour leaves

A leaf with five points

A pine cone

A leaf skeleton

Something that you think no-one else will have found

GOOD LUCK!

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## TREE FACTS - DID YOU KNOW?

Trees grow from the top and not from the bottom. So a branch that is 2m above the ground when the tree is 10 years old, will be approximately the same height from the ground when the tree is a 100 years old.

Cork was harvested for centuries from the bark of the cork oak, *Quercus suber*, native to the Mediterranean. Trees are being neglected and felled owing to screw tops and plastic cork.

Evergreens produce oxygen all the year round, deciduous trees do not.

Willow Bark and leaves have been used as a remedy for pains and fever since ancient Greek times.

Evergreen trees do not keep the same leaves forever. They shed older ones and grow new ones over a longer period.

The world's favourite luxury food -chocolate- comes from a tree. It is made from seeds of the *Theobroma cacao*. A native to central and South America, that is grown commercially throughout the tropics. *Theobroma* is Greek for 'Food of the Gods'

Oak trees provide a habitat for more than 2,000 different organisms, including birds, insects, fungi, mosses and ferns, lichens and liverworts.

Quinine comes from the bark of the Cinchona tree, *Cinchona officinalis*. Quinine is a cure for malaria that has killed more people than all wars!

The red dye found in many lipsticks and the red veined cheese, such as red Leicester. Is extracted from the seeds of the tropical American achiote tree, *Bixa orellana*.

## More fascinating tree facts

The giant redwood is often called 'Wellingtonia' introduced to Britain in 1853. It was named after the Duke of Wellington who died in the previous year.

The world's largest fruit (30kg) is from the palm tree, coco de mer *Lodoicea maldivica*.

The bark and foliage of yew trees, particularly the pacific yew, *taxus brevifolia*, contains taxol which has been used to treat cancer.

The oldest tree in the world is a bristlecone pine, *Pinus longaeva*. It is growing in the White Mountains of California. 5063 years old and are called 'Dennis'.

The heat-producing value of firewood is about half that of coal.

Extracts from the leaves and bark of the maidenhair tree, *Ginkgo bilboa*, have been shown to improve blood circulation.

The largest single organism on earth is a giant redwood, *Sequoiadenron giganteum* in California.

It's girth is 31 metres and its volume 1,487

For a tree to be native it must have arrived naturally in Britain approximately 10,000 years ago, after the last Ice Age, but before the English Channel cut Britain off from the rest of Europe.