

### Age of Tree

#### Aim:

To measure the approximate age of a variety of trees

#### Objective:

- To find a variety of trees to measure their ages (on the school grounds or local park)
- To encourage **maths** in the outdoors with students, with estimation, measuring and recording activities, as well as **physical activity** and **tree identification**

#### Equipment:

- ✓ Print off of Height-Age-of-Tree Student Activity Sheet, per group (lamine if possible)  
<https://leafireland.org/resources/>
- ✓ Measuring tape per group
- ✓ Calculator per group
- ✓ Camera/Tablet to record activity

#### Methodology:

1. Give out the Height-Age-of-Tree Student Activity Sheet. They can work in small groups of 3-4
2. Before they begin, ask the students how you can tell the age of a tree. This usually involves counting rings on a tree that has been cut down. Another method used by specialists is to bore into the bark and to take a sample. Neither is an option here!
3. Ask the students to estimate the age of the tree.
4. The important information to give them at the beginning of this activity is that **on average a tree can grow 2.5cms per year.**
5. Bring their attention to cms and inches on the tape. Ask them to use the cms so that they are all working with the same measurements.
6. Demonstrate how to measure 150 cms/1.5m from the ground (ask for help from one of the students to hold the tape on the ground at the bottom of the tree). Ask another student to place their finger on the bark of the tree, at 150cms. Another student can now take the tape and measure the girth of the tree at this height.
7. Let them break into their groups and carry out the activity, following the instructions on the Activity Sheet and record their results. Ask the students to share the jobs in their group.

#### NOTE:

On average, trees in the shade or in a forest grow 1.5cm per year. In full light they can grow 2.5cms. However, all trees grow at different rates and other factors will affect this rate, such as soil type, access to water and prevailing winds, closeness to the sea/salty winds, being eaten by animals, etc.

# Forests and Biodiversity

## LESSON PLAN

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8. Bring the group back together to give their results. Were their estimations correct or close? Find out the average age, by adding up the ages and dividing by the number of trees worked with.
9. They can repeat this activity a few times.
10. Ask some questions, such as:

**How come some trees are tall and thin and others are not, when they are the same age?** - When growing in a group, trees will grow up towards the light more quickly, so they may be younger than you expect. When given the space, trees will grow to their optimum height for their age.

### Notes:

- ✓ The measurements do not need to be exact. Estimations will do – it is more important to have fun outdoors while doing this activity.
- ✓ This activity can also be connected to Tree Identification (leaf, twig). See other LEAF Ireland Resources.
- ✓ Ask the students to mind where they trample with their feet and where they use the tape, as there will be creatures and plants living around the base and on the bark.



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