



An Taisce
The National Trust for Ireland



An Taisce - the National Trust for Ireland

National Tree Day October 3rd, 2024

**GLOBE Ireland
and
Green Schools**

Sponsored by:



Supported by:





Connecting the observations

Looking at trees from the ground with
GLOBE and from space with NASA

*Join NASA Scientist Brian Campbell for an
Interactive Student Webinar about trees*

THURS **3** OCT
1 PM



Agenda

-  **13.00 – Introduction**
-  **13.05 – Brian Campbell (NASA)**
-  **13.20 – Autumn Activities from
GLOBE Ireland**
-  **13.25 – Autumn Tips from Green
Schools**
-  **13.35 – Q & A**
-  **13.45 – End of Webinar**





THE GLOBE PROGRAM



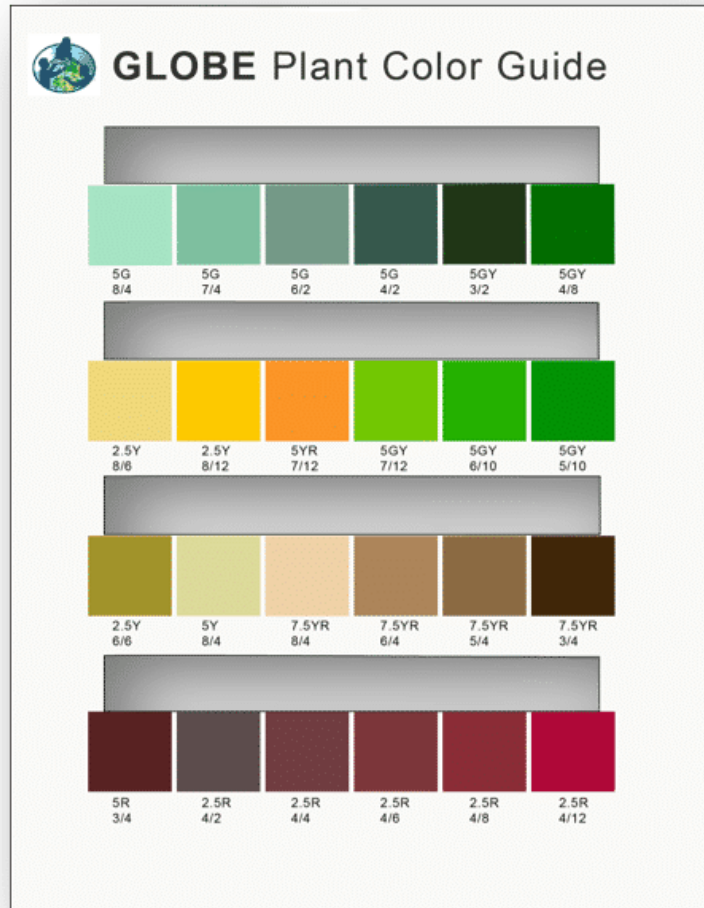
Trees Around the GLOBE Student Research Campaign Active GLOBE Countries



GLOBE Ireland – Autumn Activities



Green Down ~ Phenology Campaign



Measuring Tree Height – Why?


- Get to know your trees better
- Calculate how much carbon is stored in the trees in your school
- Help NASA by submitting data on the GLOBE Observer App

< Benefits

Recording tree height can help:

Track how trees are changing over time, and can help estimate the number of trees that make up an area.

Serve as a step to help scientists and researchers understand how trees help us balance Earth's carbon budget.



NASA has many satellites, airborne missions, and instruments, like ICESat-2, GEDI, G-LiHT and others that measure the height of features on Earth's surface, including trees. Citizen science tree height observations provide useful data for scientists to compare to what the satellites, airborne missions, and instruments are observing.

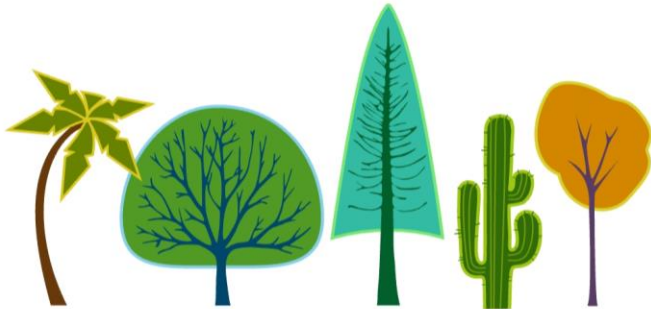
Record the height of trees in as many places you would like and scientists can use that information to improve measurement accuracy.

Measuring Tree Height – How?

Introduction

Welcome to the GLOBE Observer Trees App

This tool assists citizen scientists (GLOBE Observers) to catalog tree data, with an emphasis on measuring tree height.



The data you will be collecting with this app are shared with public, government and scientific research institutions and will contribute to a better understanding of tree height across our home planet.

Next

Setup Information

The remaining setup information is necessary for us to perform tree height calculations.

Your height:

Centimeters

Centimeters

Next

From this we estimate the following. (You can change this while using the app if you believe the information is inaccurate.)

Your average stride length: [Edit](#)

Centimeters

Centimeters

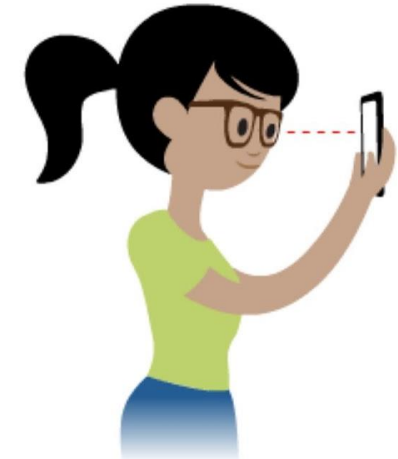
Height of the phone (eye level):

Centimeters

Centimeters

Tutorial

Measuring Angles



Height calculations are very sensitive to the angles measured.

While measuring the tree's base and top, **keep the phone at the same height and tilt it** to capture the angles.

This might make the screen difficult to see or feel awkward, but do your best to closely align the phone with the top and bottom of the tree. A stick or tripod can help with keeping the phone at the same height.

Tree Reporters Challenge!

JOIN THE CHALLENGE!
TREE REPORTERS
GET TO KNOW YOUR TREE BETTER
SEPTEMBER - DECEMBER



I look forward to a winter sleep.

There are four birds' nests in my crown.

I ❤️ GLOBE

 THE GLOBE PROGRAM

GLOBE are running a competition where students are asked to interview a tree and then submit either:

- A video of the interview
- A magazine article

Green Schools – Autumn Tips



An Taisce - the National Trust for Ireland

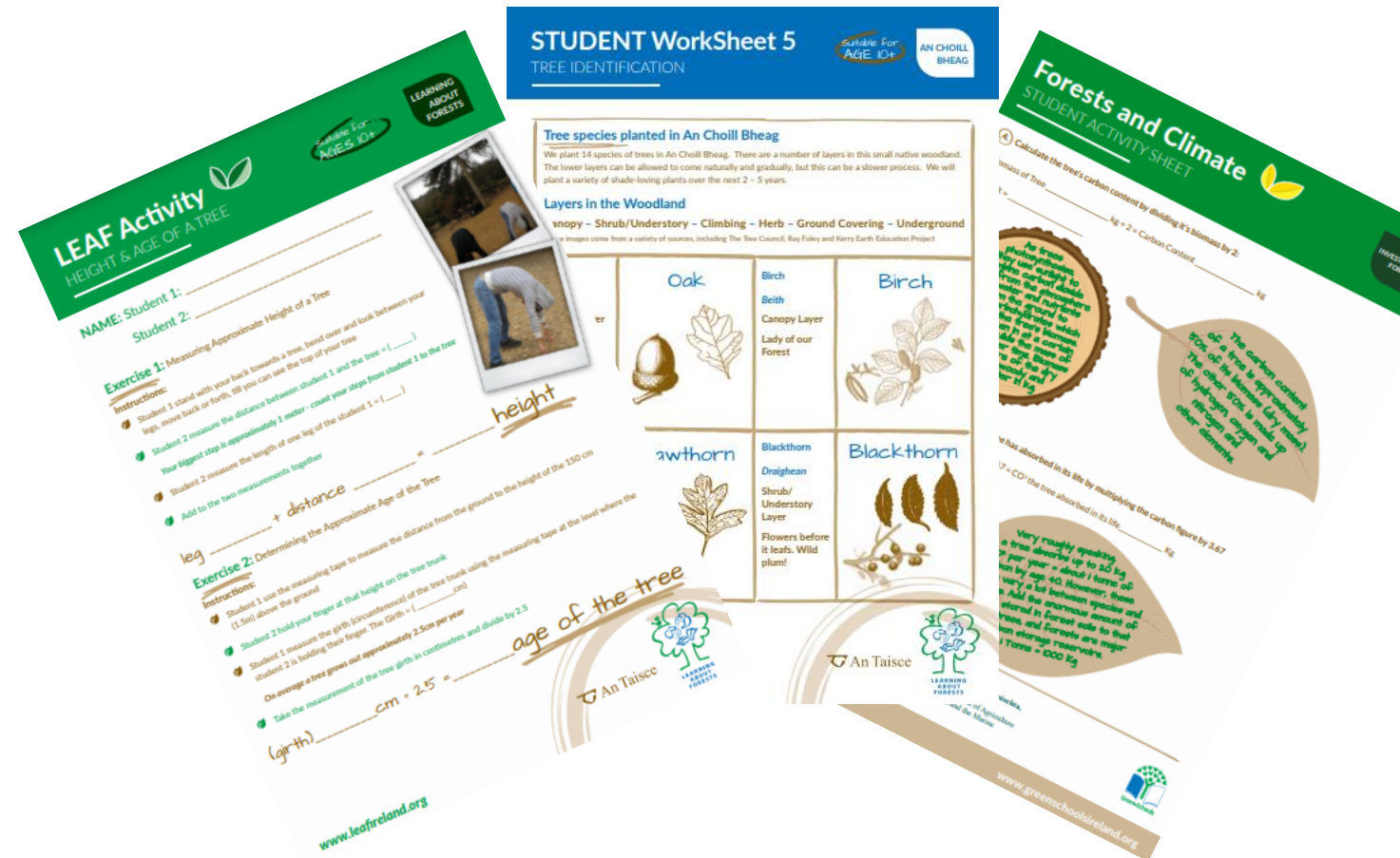
How can we help?



Learn about our Native Trees

Go outside!! Go into your school grounds or nearby park or wooded area and learn about trees.

- Learn about [our native trees](#) – LEAF and Green Schools have a lot of resources – check them out online
- Learn how to find out [the Age and Height](#) of a tree.
- For older students use this information to find out [the tree's carbon content](#) and how they fight climate change, in our "What Trees are Made Of" resource.



The collage features several educational materials:

- LEAF Activity HEIGHT & AGE OF A TREE**: A worksheet for students to measure tree height and age. It includes instructions for two exercises: measuring height by stepping back and measuring age by measuring trunk girth. A diagram shows a student measuring a tree trunk with a tape measure. The text says: "On average a tree grows out approximately 2.5cm per year. Take the measurement of the tree girth in centimeters and divide by 2.5 (girth) _____ cm ÷ 2.5 = _____ age of the tree".
- STUDENT Worksheet 5 TREE IDENTIFICATION**: A worksheet titled "Tree species planted in An Choill Bheag". It lists layers in the woodland: Shrub/Understorey, Climbing, Herb, Ground Covering, and Underground. It includes illustrations and descriptions for Oak, Birch, Hawthorn, and Blackthorn. The text says: "We plant 14 species of trees in An Choill Bheag. There are a number of layers in this small native woodland. The lower layers can be allowed to come naturally and gradually, but this can be a slower process. We will plant a variety of shade-loving plants over the next 2 - 5 years." It also lists tree species: Oak (acorn and leaf), Birch (leaf and catkins), Hawthorn (leaf), and Blackthorn (leaves and wild plum).
- Forests and Climate STUDENT ACTIVITY SHEET**: A worksheet about tree carbon content. It includes a diagram of a tree and text explaining how to calculate carbon content. The text says: "Calculate the tree's carbon content by dividing it's biomass by 2." and "The carbon content of a tree is approximately 50% of its biomass (dry mass). The other 50% is made up of hydrogen, oxygen and other elements." It also includes a note: "Very roughly speaking a tree absorbs up to 25 kg of CO2 per year = about 1 tonne of CO2 per year. However, these are not the same species and amount of trees and forests are major carbon storage reservoirs. 1 tonne = 1000 kg".

Create Woodland Habitats

- Collect leaves, fallen twigs, branches, logs
- Place them under trees & hedges as habitats for overwintering creatures
- Or even create a dead hedge as an insect/ animal highway



Plant native trees, shrubs & flowers

- Start by collecting seeds
- Acorns or Hazel nuts in Autumn
- Plant them in leaf compost
- Coffee cups are a good plant pot



Acorn Growing Guide

- We have helpful guides on our on our LEAF Ireland website which is full of lots of helpful resources.
- Like this one on growing Oak trees from acorns
- You can do the same with Hazelnuts too.
- For more adventurous schools we have a [Tree Nursery Project guide](#) – How to collect and grow local tree seeds.

www.leafireland.org

LEAF Activity 
ACORN GROWING GUIDE

Suitable for ALL AGES

LEARNING ABOUT FORESTS

From little acorns grow great oaks!

A short guide to help schools successfully germinate and grow on their little acorns into oaks. Planting, germinating and caring for acorns / young trees is a fantastic educational experience for students of any age. Here are a few tips to achieve success in your school:

Important points

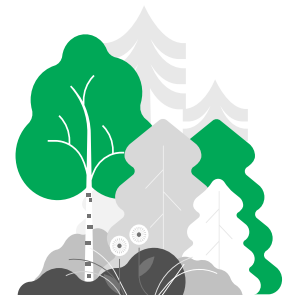
- Acorns can be collected from September through to October from underneath Oak trees
- Acorn can be green or brown when collected. It is really important that you keep them damp and do not allow the acorns to dry out! Collect them in a bag and cover them with damp leaves until you are ready to plant them. They may already have a small shoot or sprout. Be careful not to damage this whilst planting.
- Put all acorns in a sink or basin of water. The ones that fall to the bottom can be planted as they are full of food. The ones that float can be composted. They will not germinate

Steps to grow oak trees from acorns:

- 1 Find coffee cups/cardboard milk cartons and cut them in half. Wash out and pierce bottom of container a few times with a pencil to ensure the seed does not get waterlogged. Or if you are feeling ambitious, you can make a few containers with a "viewing window/panel" in the side by cutting a hole in the side of the container and replacing it with some transparent plastic from a soft drink bottle. Place the acorn right in front of panel and the children will see it change as it germinates.
- 2 Fill the containers with moist soil (you could also add compost/dead leaves)
- 3 Place one acorn (or two depending on availability) in each pot around two inches from the surface. If the acorn has a sprout, make sure not to damage it and place the acorn on its side and gently cover it with leaves/compost/soil. Label and date them and record it in your LEAF project. Take photos and draw pictures of the acorns.
- 4 Place on a classroom windowsill which gets sun. Ensure soil is kept moist
- 5 It is very important that the soil does not dry out at any point so check pots regularly.
- 6 Within a few weeks the acorns will germinate, and small seedlings will be seen breaking the surface. At Christmas and Easter, the oaks should be put somewhere where they will definitely not dry out. The small oaks should be a few inches tall by the summer time. At this point they can be planted in school grounds on a weed free bed or sent home with the students. The following autumn (once the leaves have fallen off) they will need to be transplanted into larger pots.

'The best time to plant a tree was twenty years ago
...the next best time is right now!'

www.leafireland.org



Planting Bare Roots (Nov – March)

- If your school has the space, planting bare root trees is a great way to increase biodiversity on the school grounds and we have [helpful guides](#) on our on our LEAF Ireland website.
- There is a bare root tree season, from November to March, in Ireland.
- This is when the trees, have shed their leaves and have stored their energy for spring.
- You could learn about LEAF's [An Choill Bheag](#) programme.



What is An Choill Bheag?

- Small, dense, native woodland
- Planned, Planted & Managed by students
- Outdoor living classroom
 - LEAF
 - Citizen Science
 - Woodland Skills
 - Nature Connection
 - Wellbeing



Introducing Habitat Heroes

- Introducing the **Habitat Heroes Project!**
- This is a Biodiversity Project for Primary Schools.
- We have a suite of interactive resources for each Primary Year group.
- Habitat Heroes will allow each class group to learn about 6 species of Irish Plants and Animals, how they connect and how we can help them!
- Then take actions to help those habitats in your school and local areas.



Wren Habitat Hero
Common Name: Wren
Irish Name: Driekin
Scientific Name: *Troglodytes troglodytes*

Seen in Ireland: All year round. Common throughout Ireland.

One of Ireland's smallest birds at just 10cm long from bill tip to tail. Most wrens weigh about 15g. That's the same weight as having a 5c coin plus a 1c coin in your hand!

One of Ireland's most widespread birds: it is found in almost all habitats including farmland, woodland, scrub, mountains and even on cliffs and offshore islands.

Wrens usually eat alone to the ground, using their pointed bill to make on insects, spiders and berries.

Wrens live for two years, but some can live for significantly longer - with the longest recorded life for a wren at seven years.

Wren Life Cycle

In Winter, wrens feed on their own, but will often meet up with others when it's time for sleep, so they can huddle in a group overnight, and keep warm.

In Spring wrens find a partner. They build a nest and lay their first clutch of eggs. The chicks hatch and parents look after them for a few weeks.

By Autumn the chicks grow strong, & they leave their parents. Most wrens will spend the winter feeding alone.

In Summer, the adult wrens lay another clutch of eggs. The chicks hatch and parents look after this second family for a few weeks.

Some more Facts:

- This is one of Ireland's smallest birds at just 10cm long from bill tip to tail.
- The wren has a small rounded body and distinctive cocked tail.
- It can be a bit secretive, and you often hear it before seeing it.
- The female's body parts are reddish-brown; the underparts are pink. There are faint streaks on most feathers. There is a white stripe over the eye.
- The bird has a remarkably loud song compared to its size.
- In Spring, birds find a partner and build their nest.
- The nest is usually like a hat of moss with a small entrance to one side.
- In Summer, the wren may also cover such as the chick's nest.
- Chicks are hatched for about 2.5 weeks. Parents will look after their young for just a few weeks. They are ready to roost in large numbers up to 30 birds!
- And then they will go on to have a second family before the end of the summer.
- Wrens will usually be seen alone, but during Autumn and Winter they can be seen in large numbers up to 30 birds!

Habitat Heroes Observation Animals and Birds
AP1a
Suitable for all Ages
Green-Schools An Taisce

Name:
Date:
Class:
Weather:
Date: Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

(Circle what signs) of my animal/bird I saw today: Tracks, Feathers, Droppings, Food Source, Habitat, Water source, Other, Hazard, (Something that might harm the animal)

Describe: think about shape, colour, texture, smell, size.....

Draw: Draw a quick sketch of map and were.....

Habitat Heroes Web of Life
AP5
Suitable for all Ages
Green-Schools An Taisce

Name:
Date:
Class:

All of the Habitat Heroes are connected as part of a large web of life or an ecosystem. Explore how the Habitat Hero you are learning about connects to the other Habitat Heroes around it. Answer the questions below to get a picture of the 'web of life'!

What other Habitat Hero connects with me?
Where do I live?
What is my diet?
What do I eat for me?
What do I eat in winter?
What do I eat in summer?
What do I eat in autumn?
What do I eat in spring?
What do I drink?
Where do I drink?
What do I have (shelter, water, etc...)
When do I have (shelter, water, etc...)?
What do I hide from (predators)?
When do you see me most (season, day, night, etc...)?

What is the Tree Day Tree?

- I am in full bloom in May & have many nicknames, including May-bush
- If I grow by myself in a field, I may be a Fairy Tree

HAWTHORN
SCEACH GHEAL



What is the Tree Day Tree?



HAWTHORN SCEACH GHEAL



Other Opportunities:



YRE:

- Young Reporters for the Environment is an international competition open to school children from 11 – 25 years old.
- You can enter Articles, photos, videos, podcasts....
- This year's YRE theme will be ECOSYSTEM RESTORATION. And Registration is open find out more at [Young Reporters for the Environment \(yreireland.org\)](http://Young Reporters for the Environment (yreireland.org))

Hedgerow Photography Competition



Hedgerows Ireland and the Irish Creamery Milk Suppliers Association Late Summer/Autumn 2024 Hedgerow Photography Competition

- Two age categories, children and adults. Generous cash prizes
- Entry is free. Judging will be by a panel of specialists
- Entries close at midnight on 31st October



www.hedgerowsireland.org

Join the contest now!

www.hedgerowsireland.org



ICMSA THE MILK SUPPLY ORGANISATION



Questions?

Thanks for taking part in our Webinar!

Happy **#treeday2024!**

globe@eeu.antaisce.org



An Taisce - the National Trust for Ireland



Links to Resources

- Our Native Trees:
<https://leafireland.org/wp-content/uploads/2019/08/AnCB-WS5-Tree-ID.pdf>
- Age and Height of Trees:
<https://leafireland.org/wp-content/uploads/2017/03/LEAF-Activity-Height-Age-of-a-Tree.pdf>
- What Trees are made of:
<https://leafireland.org/wp-content/uploads/2020/08/FC-LP-SAS-Expt.1What-Tees-are-Made-Of.pdf>
- Tree Nursery project guild:
<https://leafireland.org/wp-content/uploads/2020/04/LEAF-Tree-Nursery-Project-low-res.pdf>
- Leaf website:
<https://leafireland.org/>
- Grow oaks from acorns:
<https://leafireland.org/wp-content/uploads/2018/10/LEAF-Activity-Acorn-Growing-Guide.pdf>
- Bare Root Planting:
<https://leafireland.org/wp-content/uploads/2019/08/LEAF-Lesson-Plan-Planting-Irish-Native-Bare-Root-Trees.pdf>
- An Choill Bheag:
<https://leafireland.org/themes/an-choill-bheag/>
- Habitat Heroes:
<https://greenschoolsireland.org/the-programme/projects/habitat-heroes/>
- [Hawthorn](#) Habitat Hero
- YRE: <http://www.yreireland.org/>
- Hedgerows Competition: <https://hedgerowsireland.org/blog/hedgerow%C2%A0photography-competition/>

GLOBE Ireland Links

- GLOBE Ireland Page: [Ireland - Ireland - GLOBE.gov](#)
- GLOBE Educator Account - [Teachers / Formal Educators - GLOBE.gov](#)
- Stay tuned via our monthly newsletter here, sign-up here: <http://eepurl.com/hrklyD>
- View GLOBE Projects https://linktr.ee/globe_ireland
- Feel free to follow us on Twitter - [GLOBE Ireland \(@GLOBEIreland\) / X \(twitter.com\)](#), Facebook - [Facebook](#) and Instagram - [GLOBE Ireland \(@globe_ireland\)](#) • [Instagram photos and videos](#)
- European Phenology Campaign: [European Phenology Campaign - European Phenology Campaign - GLOBE.gov](#)
- Tree around the GLOBE Campaign: [Trees Around the GLOBE Campaign - Join us! - Trees around the GLOBE - GLOBE.gov](#)
- Tree Reporters Challenge: [Events - Europe and Eurasia - GLOBE.gov](#)
- **Contact Information: Email:** globe@eeu.antisce.org
- **Express interest in future campaigns – sign-up here** <https://arcg.is/1qW8Pf0>