

# Forests & Products

## BACKGROUND INFORMATION AND ACTIVITIES

INVESTIGATE  
FORESTS

### Background information

- ☛ Ireland has a good climate for growing trees, as it is generally wet and mild
- ☛ Almost 11% of Ireland's land area is currently under forestry. 9% is non-native, 2% is native. We are far behind the European average of 30%
- ☛ Tree Plantations are planted mostly in marginal land, which is often in the uplands
- ☛ Approximately 50% of our forestry is privately owned. The state owns the remaining 50%
- ☛ Forestry is valued at €2 billion (including grants, planting jobs, harvesting, haulage, sales, processing, etc.)
- ☛ Most of our forest products are exported
- ☛ The primary products made from Irish Forests are:
  - Sawn timber for construction
  - Composite products – MDF Board, Chipboard, OSB Board)
- ☛ Currently 12,000 people are involved in employment – both directly and indirectly
- ☛ Most new forests are planted by private landowners, including farmers. Up to €650 per hectare available for planting native broadleaf trees. Grants are smaller for planting conifers
- ☛ Softwoods can mature and be harvested by 40 years growth
- ☛ Most hardwoods can mature and be harvested by 80 years growth
- ☛ Main species planted currently are the Sitka Spruce, Norway Spruce, Lodgepole Pine, Larch, Douglas Fir
- ☛ Native Trees are also being grown to make products e.g., Oak, Ash (Ash cannot currently be planted due to Ash Dieback disease-Chalara), Alder, Hazel, Willow
- ☛ In Ireland, the total produced is 3.3 million cubic metres per year (explain cubic metres)
- ☛ Half a million tonnes of paper and timber sheets
- ☛ Irish forest plantations make up the same size as 1.6 million football fields
- ☛ The world's tallest timber structure is Mjøstårnet in Norway (85.4 metres). It was built using cross-laminated timber (CLT). There is huge potential for the use of more wood in construction

### Prompt questions to ask students to start the conversation

- ✓ How much of Ireland is under trees? 11% (had been up to 80% in the past)
- ✓ How much of Ireland is under native trees? Currently less than 2%
- ✓ How many kms. of hedgerow do we have? 220 – 250,000kms – they are vital ecological/wildlife corridors, act like linear woodlands and some are part of our old forests
- ✓ Oldest trees in the world – 5000+ years, Bristle cones in White Mountains, California
- ✓ Oldest trees in Ireland – Yew tree growing in the Muckross Friary, Killarney National Park (670 yrs.), Maynooth College (700-800 yrs.), Crom Castle, Fermanagh (800+ yrs.)

Encourage further research following the workshop



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### Activity 1: Brainstorm what do trees do and how do we benefit from trees?

**Sample answers:** Trees, forests, woodlands, thickets and hedges clean air, improve soil structure and prevent erosion, provide oxygen, store carbon, provide shelter from wind and rain, cool our planet down, part of water and air cycles, store and recycle nutrients, protect us from flooding, beautiful landscapes and special places to visit, wellbeing, building materials, boats, medicine, fuel, charcoal, fibre, food, names of places and people, history (Brehon laws), food, home and refuge to lots of wildlife communities (animals and plants), wildlife corridors, interconnectivity for genetic diversity.

### Activity 2: Brainstorm what is made from wood?

Break the class into groups and ask them to write down as many wood products as possible. Record a sample of their answers on the blackboard.

#### Sample Answers:

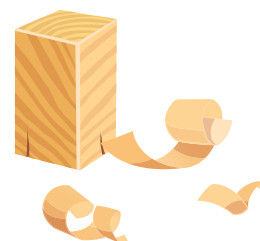
Barrels	Electricity poles	Furniture	Jewellery	Matches
Baskets	Beehives	Oils	Boats	Toothpicks
Paper	Pencils	Flooring	Tables	Fenceposts
Chairs	Chopping boards	Walking sticks	Pegs	Shillelaghs/Walking sticks

#### PROPS

Gather your own box of wooden props to bring to the school: walking sticks, picture frames, willow baskets, wooden bowls, wooden spoons, pendants, galls, toilet roll, tissues, paper, cardboard, books, pencils, medicine (willow bark contains aspirin), beehive frame, Jenga etc.

#### Additional props

Trees in pots, tree seeds, logs with moss, tree with rings, variety of branches/leaves; willow rooting in water, willow rods to be cut and left with class to root in water as experiment and then to plant out in school grounds, other woodland plants.



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For this workshop and part of the Shrinking Forest activity, emphasis these 5 species as examples of trees and the products they are used to make.

Tree	Used to Make (Product)
Holly Tree (Crann Cuilleán)	Wooden Table
Cherry Tree (Crann Silín)	Guitar
Ash Tree (Crann Fuinseóg)	Hurley
Scots Pine Tree (Crann Réine Albanach)	Roof Beams for a House/School
Oak (Dair)	Timber for Flooring/Piece of Art/For Oak Barrels/ Funeral Casket

Next ask the students to look around their classroom and write down what products are made from wood. This can be a simple hands-ups survey and record their answers on the blackboard.

**Sample answers:** tables, doors, paper, notebooks, reading books, paint brushes, window frames, chairs, rulers, wooden beams etc.



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### Activity 3: Brainstorm what jobs/careers depend on trees and wood?

Break the class into groups and discuss. Some answers may need an explanation. Give them some jobs they may not have thought of, for example, a truck driver transporting wooden logs to the sawmill etc.

Sample answers:

Forester	Machine driver	Timber mill owner	Product Designer
Barrel Cooper	Ecologist	Carpenter Joiner	Engineer
Craftsman	Farmer	Biomass Fuel Supplier	Carpenter/Fitter
Basket weaver	Artist	Truck Driver	Tree Surgeon

### Activity 4: General discussion

Briefly discuss the historical context of woodlands and products in Ireland (wattle and daub, tool handles, willow weaving).

Display the two wooden blocks (oak & spruce). Ask 1-2 students to come to top of the classroom, compare the two blocks:

- ✓ Weight (if there is a weighing scales, ask the students to weigh them and note the difference)
- ✓ Hardness

Then discuss with the entire class:






- ✓ How, why, and where each are grown
- ✓ The reasons landowners choose to grow them (farmers, landowners)
- ✓ Importing timber V's growing our own
- ✓ What species to plant and where? Consider appropriate land use and soil type (e.g. wet land - willow, alder, birch / dry land - hazel, ash, oak)
- ✓ Benefits of spruce over hardwood
- ✓ Drawbacks of spruce over hardwood
- ✓ Danger of Monocultures
- ✓ Qualities of wood and the drawbacks of wood
- ✓ Why don't we make roads out of wood? Or cars out of wood? Will we in future?
- ✓ Benefits of wood over steel?
- ✓ Carbon sink rather than carbon source
- ✓ The need to teach and learn forestry and woodland skills such as tree planting, coppicing, pollarding etc.



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## Activity 5: Discussion on Hurley making

-  Ash tree needs to be 32cm diameter at chest level to be ready for cutting
-  It takes on average 30 years to get to this point
-  In Ireland, we make almost half a million hurleys a year
-  The bottom one metre of the ash tree is worth up to €100
-  Unfortunately, they are still mostly imported from countries like Poland

*Potential to discuss ecosystems under pressure – Spread of Ash Dieback (Chalara)*

## Additional Activities:

Weaving  
Clay and wattle house building  
Jenga

## Useful Links:

### LEAF Theme – Forests & Products:

[https://leafireland.org/resources/theme\\_category/forest-products/](https://leafireland.org/resources/theme_category/forest-products/)

### LEAF International Resources on Products:

<https://www.leaf.global/our-resources>