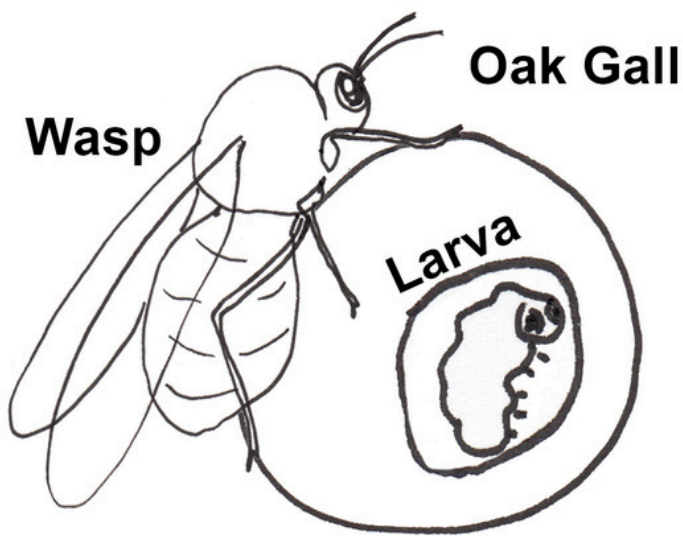


# The Oak, King of the Trees



Activities created by Duffy Mooney Sheppard



On a drizzling autumn day in the Phoenix Park, I came across a small oak wood. On the tips of the tree branches, I spotted round, smooth growths - Oak marble galls. How wonderful! They were created when gall wasps scratched at the oaks' bark and placed their eggs there. In response to the scratching, the oak tree produced these protective round growths that then grew around the wasp egg. Inside each gall, the egg hatched and the wasp larva grew. These galls were once green but had now turned brown. Each had a small round hole - this told me that the gall was now empty, the baby wasp

## Make Oak Gall Ink

This is a real science experiment. And one that links us back to our ancestors from hundreds of years ago who made ink in this way.

You will need:

- A plastic bag or tea towel
- hammer or rolling pin
- Jam jars,
- A sieve/cheesecloth
- Oak Galls (4 - 5, brown ones)
- Rainwater
- Rusty nails
- White household vinegar
- Optional: gum arabic

## Instructions for Oak Gall Solution:

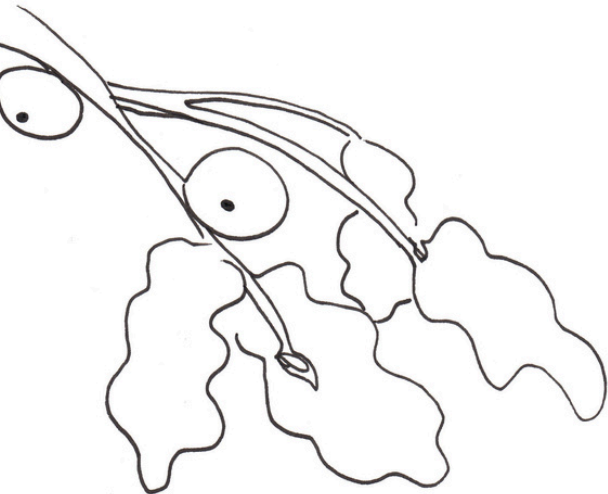
- Put the oak galls in a bag and crush them with a hammer or rolling pin until they become a coarse powder.
- Put them in a jar and cover with rainwater.
- Put the jar on a bright windowsill for 3-5 days.
- Strain the liquid into a clean jar with a tight-fitting lid.

**Nail Vinegar solution:**

- Put the nails in a jar and cover with vinegar.
- Loosely place the lid on top and store somewhere for 1 - 2 weeks, carefully shake every now and then.
- Strain the liquid, discard nails. Best if stored in a shed or safe and out of the way.
- Add a few teaspoons of your strained nail vinegar solution to the oak gall solution and leave for a day. The tannins from the gall react with the iron from the rust. It will darken, becoming blacker.
- Optional: Stir in half a teaspoon of gum arabic to thicken your ink. Test consistency and add more if you prefer a thicker ink.

Storage: Store somewhere dark, shake before each use. It may thicken over time, add a few drops of water to loosen it as needed.

Note: You can also use this same process using brown acorns to make acorn ink.

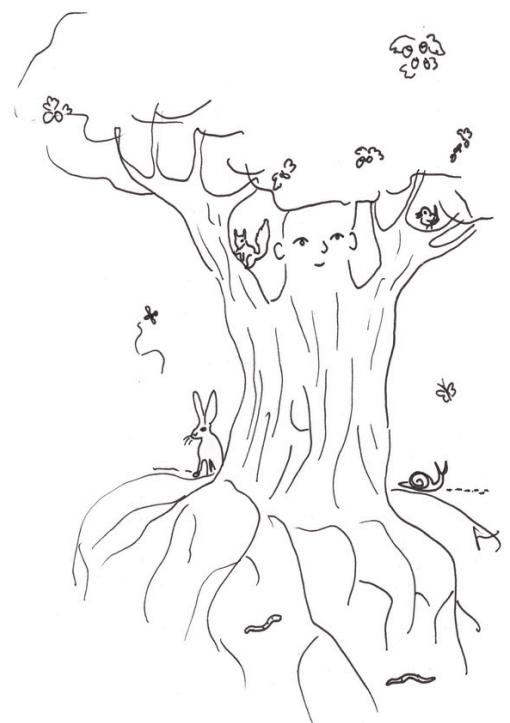
**Becoming a Tree**

**Oak trees can live for 500 years, they are a protective home for so many animals, creatures and plants.**

**You will need:**

- Collect sticks to use as your pen.
- Ink (Oak gall ink if you make it. Alternatively, any ink will do)

Sheltering beneath that canopy filled with oak galls, my eyes slowly adjusted to the dark, I realized I wasn't alone—deer stood and rested nearby, one scratching against a fallen oak branch. Looking carefully, I spotted the tiny birds hopping from branch to branch, between the leaves and young acorns. The air was full of flying insects. High up in the tree's crown, I heard a chattering squirrel, but I could not see it. Woodlice moved slowly between the fingers of ivy crawling up an oak's trunk. A snail, moving slower still, enjoying the wet day. Beneath the tree, its roots sprawled deep under the soil, perhaps a rabbits warren, a foxes or badgers set tunneled between them. Worms and centipedes and beetles are wriggling and squirming there



**Exercise 1: Scientific Research Drawing**

- Gather some images of oak trees and our woodland creatures.
- Oak tree, Red/Sika/Fallow Deer, Red/Grey Squirrel, Wren, Blackbird, Magpie, Woodlouse, Centipede, Garden Snail, Ivy, Worms, Acorns...
- Dip your stick into your ink, draw some sketches of the images you collected. Lots of drawings will get you familiar with these creatures and plants.

**Exercise 2: Imagine That...**

- Stand still and imagine you are standing out in nature. Your toes begin to grow and spread beneath the soil. Reach up, your arms, hands and fingers spread out and sprout leaves. You become an oak tree: solid, strong and tall. Feel the wind, the rain, the sunshine...
- Who lives there? In your branches, trunk or beneath you, amongst your roots? Draw a portrait of yourself as a tree, busy and teeming with life.

Want to make a forest?

Add your family and friends as trees, you can glue on a new page if you need space.

This might be a drawing you make over a few days, or weeks. You can return to it at different times, add more paper and draw more details. Try adding more paper underneath the trees to go deeper underground or add paper above to build a wider sky. Your drawing can grow slowly, just like an oak forest.

