

# Hello Trees Resource Sheet



## KS1 Y1 Science Diary Item

### Lime-tree whirlers

#### OBJECTIVE: FIND OUT ABOUT LIME TREE SEED DISPERSAL



You don't have to use every Science Diary suggestion!  
You don't have to do everything on this sheet!  
Bits in **bold** recommended.

#### WHAT YOU NEED

**A camera/phone to catch delighted expressions as bracts tossed in the air.**

Magnifying glasses.

**Some lime-tree bracts with tiny nuts dangling down.**

Lime trees are common in streets, churchyards, parks – and school playgrounds

I found heaps of bracts on the pavement under lime trees.

I picked up some from the ground and one or two off the tree,

Then set them out on a white A4 piece of paper to show you.



#### WORKING SCIENTIFICALLY

✓ **Experience and observe:** bract, stalks and nuts:

**colour, weight, size, texture, # of stalks, # of nuts.**

✓ using magnifying glasses: **lines on the nuts, veins on the bract, any creatures.**

✓ school locality: **where you found them**

x grow our own: **maybe save the seeds for another time**

✓ **Curiosity and questioning** (all suggestions acceptable):

**What are the nuts?** [a seed in a hard case]

**What were they before?** [flowers (look for a tiny needle still sticking out of some nuts. It is the remnant of the flower's style and stigma see [lime flowers](#))]

**Would they grow?** [Maybe. The class can plant some other seeds later. (You *could* save & plant later but lime seeds seldom viable and can take 18months to germinate)]

**Why the bract?** [elicit

- that the bracts look dead → dry → light weight → would be carried by wind → spin → be in the air longer → be carried even further from mother tree → into sunshine;
- the pale bracts might attract bees to the former flowers;
- the bracts might keep rain off the nuts (and former flowers)
- the bracts might cushion the seeds and give them a soft landing.]

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- ✓ **Tests to answer questions: 1. Test whether bracts keep the seeds in the air for longer:**



**Stand, hold the stalk of the bract, toss it into the air.**

**Request a pupil to stand on a chair and repeat the test. Repeat at will!**

**Repeat for nuts without the bract to support their fall.**

**Conclude: bracts keep the seeds in the air for longer (probably more so in the wind).**

2. By cutting open a nut, you could test whether the nut consists of only one seed in a hard shell, but the shell is very hard indeed and you will need a very sharp, pointed knife.

Perhaps show one you have cut open earlier!

- ✓ observe changes over time: in home time, pupils find lime trees and watch for changes

- ✓ notice patterns, compare: bigger than birch, smaller than acorn ...

- ✓ Group and classify: **group with other light-weight seeds, classify as wind dispersed.**

- ✓ **Use secondary sources of information:** Books, Photos, Videos:



Read [Hello Trees book 'Lionel Lime'](#) to confirm that nuts developed from flowers.

- ✓ Develop scientific language:



**'bract' is a modified leaf: one that is different to other leaves of the plant.  
'nut' is a single seed in a hard case.**

- ✓ **Communicate what they find**

- ✓ To different audiences: tell the class, demonstrate to reception, write to grandparent, ...

- ✓ In different ways: draw/paint the nuts hanging from bracts, make a pattern of bracts in a circle, video pupils tossing a bract, write a report, record an audio report

- ✓ PLANTS

- ✓ Identify common trees: can recognise lime tree seeds and bracts.

Read ['Lionel Lime'](#) at story time to reinforce all clues to lime tree identification.

- ✓ ANIMALS examine, count legs and identify any creatures (ants, earwigs, beetles)

- ✓ EVERYDAY MATERIALS

x Identify and name everyday materials – another time

- ✓ Properties of everyday materials – light-weight materials fly best

- ✓ SEASONAL CHANGES

- ✓ Weather: - Wind is stronger in Autumn so seeds will be carried further

- Better if seed stays cosy in its hard shell until Spring when it is warmer.

x Day length – another time

**PLENARY: 1. Pupils know what lime tree bracts and seeds look like.**

**2. Lime tree seeds are dispersed by the wind.**

**3. Lime tree seeds hang from bracts that spin as they fall, keeping the seeds in the air longer so that they are carried further by the wind.**

**4. A 'bract' is a specialised leaf. A 'nut' is a single seed in a hard case.**