

Hello Trees Resource Sheet



KS1 Y1 Science Diary Item

Holly leaves grow on Holly Trees

OBJECTIVE: FIND OUT MORE ABOUT HOLLY TREES

We see holly leaves everywhere in the lead-up to Christmas.

Pupils might find that there is more to holly trees they expect.



OUTDOOR ACTIVITIES IN RED, INDOOR ACTIVITIES IN BLUE

Holly berries are toxic. They are for the birds!

WHAT YOU NEED TO DO

Visit a churchyard or park to **see holly trees**, collect leaves, look for, examine and take photos of tree shape, berries, buds and bark.

You could also take wax crayons and paper to do bark rubbing.

OR

Collect (or ask pupils to collect) **holly leaves**: preferably including some new leaves [at shoot tips, more tender, paler green], ones with fewer or no spines, and some variegated ones.

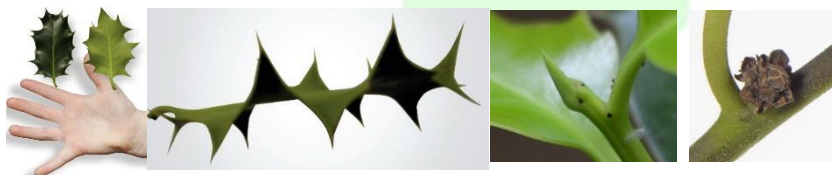


WORKING SCIENTIFICALLY

✓ **Experience and observe** + ✓ notice **patterns** and **compare**

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

- Measure length of **leaves** against the palm of pupils' hands/a ruler.
- Why might some leaves be smaller than others? [young and will grow, or don't get much light so stopped growing]
- Do holly leaves all fall off in Autumn? [no]
- Do holly leaves ever fall off? [yes, but not all at once. Holly trees are **EVERGREEN**]
- Think of words to describe the leaves [tough/stiff/leathery, waxy, shiny, dark green]
- Are the leaves the same colour underneath? [no, light underneath]
- Why might the leaves be lighter underneath? [I can find no answer in scientific sources. Perhaps upper surface darker to capture more light (wider range of wave lengths): holly is typically in understory of woodland where there is reduced light]
- Are holly leaves shiny or matt? [shiny on top, matt underneath]
- Feel how prickly; see how some spines point up or down; is there a **pattern** (up, down, up, down or other pattern)?



- Why might some holly leaves not have spines? [takes extra resources to make spines. Leaves too high for deer to reach do not need spines, new leaves emerge without spines then develop them]

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- Are all leaves prickly?
 - What **shape** are holly trees? (oval, taller than wide); Draw the shape in the air (like the dormouse in 'Hetty and Homer Holly').
 - Did any pupils see **buds** at end of shoots? What did they look like? [pointed] What might come out of them? [new shoot]
 - Did any pupils see buds in leaf axils? What are they like? [bunch of teeny nobbles]
 - What might come out of them? [flowers]
 - Do all holly trees have **berries**? [no] Why might that be? [Some flowers didn't get pollinated. There are two kinds of holly trees: some produce pollen, others produce berries. See in Hello Trees book 'Hetty and Homer Holly']
 - How can we tell which holly trees produce pollen and which could have berries? [we shall be able to tell in Spring when we shall see holly flowers]
 - Imagine trying to eat holly leaves.
 - What animals might want to eat them? [deer in Winter when they are desperate]
 - When would be a good time for holly trees to produce new leaves? [not in Winter when animals are desperately hungry and new leaves have yet to grow spines]
- ✓ **Tests to answer questions** [long term, I am afraid 😞]:



- Tie a piece of pink string to a branch of a holly trees that does have berries and a piece of blue string to holly trees that do not have berries so that you can examine their flowers in Spring and see how they differ.
- Take photos of tree shape, berries, leaves, buds – and of pupils absorbed and smiley.
- Do bark rubbings: working in pairs, one pupil hold the paper across the bark, the other rub a wax crayon across the paper].

- ✓ school locality: where in relation to the school pupils found holly trees.
- ✓ grow our own: you could plant holly berries and put the pots outdoors.
- ✓ observe changes over time: note berries in Winter, anticipate flowers in Spring.
- ✓ group and **classify**: spiny leaves compared to smooth leaves
- ✓ Use secondary sources of information:



There is no better source of information about holly trees for KS1 pupils than

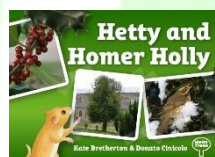
[Hello Trees 'Hetty and Homer Holly':](#)

10-min read at storytime,

Pupils all together

- make tree shape in the air,
- cup hands together to hide a dormouse,
- outline with a finger, the shape of a holly leaf on the palm of their other hand.

and pupils to read in their own anytime.



Hetty and Homer are holly trees. They look alike but their flowers are different and only Hetty grows berries. The dormouse is making the shape of a holly tree in the air. Can you?



Here is a holly leaf. See if you can trace round it. Now you will always know a holly leaf.

PLENARY Pupils know that a holly trees is EVERGREEN.

Pupils can name and identify a holly tree:

They can recognise all 6 identification clues:

branching (overall shape), **bark** and **buds**; **leaf**, **flower** and **fruit**.