

Hello Trees Resource Sheet

What to look for outdoors all year

Conifer Basics: leaves



There are always exceptions:

- Yew trees are called conifers but don't bear cones.
- Larch trees lose their leaves in winter.
- As they age, Scots pines lose their cone shape.
- Monkey puzzle leaves are relatively chubby.

But, **in general, Conifers**



bear cones



are evergreen



cone-shaped



have narrow waxy leaves

There are 3 groups of conifer leaves:

1. **NEEDLES**
 - a. **SHORT NEEDLES IN WHORLS/rosettes**: cedars and larches.
 - b. **LONGER NEEDLES IN GROUPS of 2, 3 or 5**: pines
2. **FLATTENED NEEDLES**
 - a. **FLATTENED NEEDLES and smooth twigs**: firs, fir-like, yews, monkey puzzles.
 - b. **FLATTENED NEEDLES ON PEGS**: spruce and spruce-like trees.
3. **TINY SCALES** in strands/cords: cypress and cypress-like trees.

1a. SHORT NEEDLES IN WHIRLS



e.g. European **larch**: *Larix decidua*.

Unusual conifer in that it loses its leaves in winter.
Always has many cones on its branches.

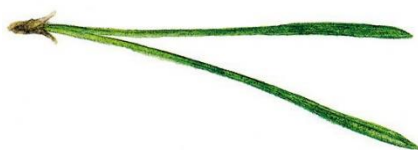


e.g. Atlas **cedar**: *Cedrus atlantica*
Barrel-shaped cones.



Ripe cone scales are easily detached:
they have an attractive shape and velvety feel.

1b. LONG NEEDLES IN GROUPS of 2, 3 or 5



e.g. Scots **pine**: *Pinus sylvestris*

Needles are in groups of 2
As the tree ages it loses its conical shape.

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2a. FLATTENED NEEDLES and a **smooth twig**: firs, fir-like, yews and monkey puzzles.



e.g. the common silver fir: *Abies alba*



They have **flattened needles** that, when detached, leave **tiny hollows along the twig**.
Lines of white wax over stomata on underside of the leaf.
Cones are upright as they ripen, release their seeds and disintegrate while still **on the branch**



e.g. the **fir-like** Douglas fir: *Pseudotsuga menziesii*



They have **flattened needles** that taper to a short mound which detaches with the leaf leaving the **twig smooth**.
Lines of white wax cover their stomata.
Their **cones hang down** as they ripen.
There are 3-pointed tufts between the cone scales.



e.g. Monkey puzzle: *Araucaria araucana*

Leaves are **plumper** than most conifer leaves.
Cones are huge and heavy.

2b. FLATTENED NEEDLES ON PEGS, twig rough with pegs: spruces.



e.g. Norway spruce: *Picea abies*

The original traditional Christmas tree.
We can see the **pegs** at the base of the needles.
Leaves drop off leaving **rough empty pegs on the twig**.
Cones hang down and drop off when ripe.
Spruce, Picea, pegs, pendulous cones that plummet.

3. TINY SCALES: cypress and cypress-like trees.



e.g. Mediterranean cypress: *Cupressa sempervirens*

Tall, very thin trees.
Leaves are tiny scales in dense sprays growing upwards.
Lumpy, oval cones, not much bigger than a walnut.



There is so much more at [Hello Trees Resources](http://www.hellotrees.co.uk): a Key Stage 1 Lesson Plan on conifers, fun remembering which conifer is which and more about larches and other trees.