

KS1 Y1 Plant Science

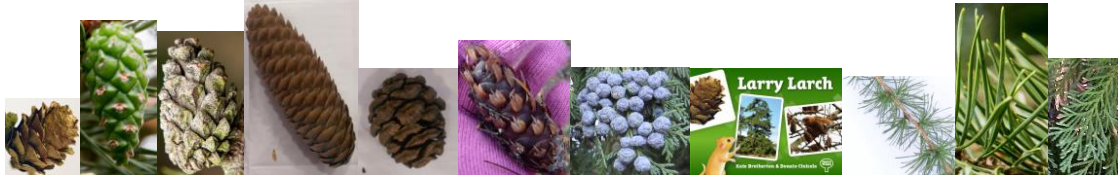
Lesson Plan 5, January

Conifers. Larch.



Objective: 1. Learn that a CONIFER IS A TREE THAT PRODUCES CONES
2. IDENTIFY and NAME LARCH TREES 3. **OBSERVE CONIFER CONES and LEAVES.**

You will need: 1. Lots of different conifer cones. 2. white paper to shake seeds on to.
3. Hello Trees book Larry Larch. 4. Lots of sprigs of different conifers.



Before schools break for Christmas: Ask pupils to look out for and **gather** cones if they go into churchyards, parks or countryside during the holiday.

Ask pupils who have a 'real' Christmas tree to bring a small cutting of it.

Alternatively, find cones and cuttings yourself (try cemeteries), or prepare to take pupils out into their **local environment** (a churchyard?) to look for conifers and **gather** cones.

Be aware: 1. Conifers are trees that produce cones. They have narrow leaves.

2. Alder tree fruits look like cones but are not. An alder leaf is broad.

3. Yew trees are lumped with conifers although the fruit is not a cone – and is poisonous!

4. Some cones are tiny: the size of a pea.

Scientific
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LESSON

LEARN THAT A TREE IS A CONIFER IF IT PRODUCES CONES.

Start with Christmas trees: Who had one? Were they real? One at school? At the shops?

Elicit: evergreen, pointed tops, whorls of branches, widest at the base, **cone-shaped**.

Christmas trees are **conifers**. Say, they are **CONIFERS** because they produce **CONES**.

Have the cones to hand. Say, 'These are **CONES**.'

Say **TREES THAT PRODUCE CONES ARE CONIFERS**.

Say, 'We are going to look at the cones carefully. In science, we say **observe** the cones.'

Hold up a cone and **ask**, 'What do you think is inside the cone?' All suggestions valid.

Put down a piece of white paper, turn the cone upside down, tap it.

If nothing, say 'Let's try another'. If **creepy crawlies**: say 'the **CONE** is the **insects' home!**'

If a **seed with a wing**, let pupils **observe** it. Use a magnifying glass.

Ask for suggestions as to what it is. Confirm that it is a seed with a wing.

Say, 'Seeds inside! **CONES** are the **fruit** of the tree!'

Remember: **seeds** need to reach somewhere where there will be **soil, light, water, space**.

Remember: windborne **seeds** are dry (light) and have wings: **these seeds will be windborne**.

Ask for suggestions as to what else might happen to the **seed(s)**: might be eaten by a **bird, insect** or **small climbing mammal**. **Remember** seed stealers.

Elicit that a dry windy day would be a good time for the scales to open and release the seeds.

Look at each of the cones that have been brought in.

Elicit **descriptions**: colours; texture; markings; **size, shape**; scales open or closed.

Elicit possible advantages of colour and size; when and why the scales are open or closed.

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Read 'Larry Larch' so that pupils can **IDENTIFY and NAME LARCH TREES**.

- Explain: you will read a story about a **LARCH TREE**. **LARCH TREES** have **CONES**.
- Elicit that because it has **CONES** it must be a **CONIFER**.
- Say, 'See if you can **remember LEAVES, FLOWERS, FRUIT, BARK and TREE SHAPE**.
- While reading, emphasise: **TREE SHAPE, BARK, LEAVES, FRUIT**.
- Clarify: **most conifers are evergreen. Larch trees are an exception**.
- Emphasise **seasons'** changes in temperature, changes in the tree.
- Remind pupils of **dormouse: sleeping now: Winter, cold**.

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Make sure that pupils can **IDENTIFY and NAME LARCH TREES**
Elicit: **LEAF** (shape, colour, size), **BARK** (colour, feel), **TREE SHAPE**.

Ask pupils to stand and make the **SHAPE OF A LARCH TREE** in the air (as dormouse).
Ask pupils to outline the **SHAPE OF A LARCH CONE** on their hand.



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OBSERVE CONIFER LEAVES

Say, 'If leaves come from a tree that has **CONES**, they are **CONIFER leaves**.

Look in turn at each of the examples of **conifer leaves** that have been brought in.

Clarify: Each needle or scale is a leaf. Say, 'We are **observing conifer leaves**.'

Use a magnifying glass. Smell the leaves (some are said to smell of pineapple)

Encourage pupils to put together (**classify**) leaves that they think are similar.

For Key Stage 1, simply **observe** and look for similarities.

However, botanists roughly group conifer leaves as follows:

1. Needles in rosettes: larch and cedar trees;
2. Long needles in groups of 2, 3 or 5: pine trees;
3. Flat needles that nestle in a little hollow on the twig: fir trees;
4. Needles on pegs (bare twigs are covered in rough pegs): spruce and spruce-like trees.
5. Strands of tiny scales: cypress and cypress-like trees.

Remind pupils:

CONIFERS ARE TREES THAT HAVE CONES.

HOW TO IDENTIFY LARCH TREE BY ITS BARK, TREE SHAPE, LEAF, FLOWERS, CONES.

PLENARY

1. Pupils can now **IDENTIFY AND NAME LARCH TREES**.
2. Pupils know that a **CONIFER IS A TREE THAT PRODUCES CONES**.

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Follow-up lessons

(As before): **PLANT SOME conifer SEEDS** in pots. Cover some pots with netting to deter mice and squirrels and leave them outside. Keep some pots indoors. Put some seeds in fridge (to be planted in **Spring**).

RECORD OBSERVATIONS in the Science Diary. Say, 'We **record our observations**'.