



MODULE 9

How to make leaf skeletons

Pre- preparations

Put 40 - 60 leaves (*Fagus sylvatica* - beech, *Ficus benjamina* – weeping fig) into a fireproof glass jar with half a litre of KOH (10%, Potassium Hydroxide). Place the glass jar with its contents into a water bath and heat gradually. Let the leaves simmer for about 45 -60 minutes.

Take the leaves out of the KOH using a glass stick (metal equipment will easily corrode) and place them in a big bowl containing water - you can rinse them if necessary. They should be kept in water until used.

For each child prepare a sheet of tissue paper, protective glasses (so that they can't touch their eyes with wet fingers), a lab coat (or protective apron), a soft tooth brush and thin rubber gloves.

Each group of children on a table should be given a bowl with some cooked leaves in water (enough for 1 per child), and a flat dish filled with household bleach. Please warn the children about the need to take safety precautions not to get bleach on their skin or clothes!

Pre-prepare some envelopes for the children to take their leaf skeletons home.

Step-by-step process



Step 1:

Put on the lab coat, the gloves and the protective glasses.

Take a leaf out of the bowl and lay it on the tissue paper.

The mid-rib (main rib) should be facing upwards.



Step 2:

Remove the tissue between the veins by brushing from the middle rib to the leaf edge. Use more water to wet the leaf in between brushing and turn the leaf over to work on both sides.



Step 3:

The leaf is ready when it looks translucent and all green material has been removed!



Step 4:

Put the leaf in the bleach. Push it around with your gloved fingers to completely cover. It can stay there until it becomes pale brown, cream or white. Remove any last pieces of tissue with the brush or gloved fingers. Take the leaf out and dry it by blotting on tissue paper. Observe the leaf veins under the microscope. Children can take their leaf skeleton home safely by wrapping it in tissue paper and putting it into an envelope.