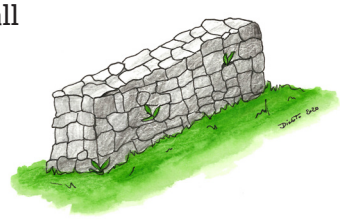
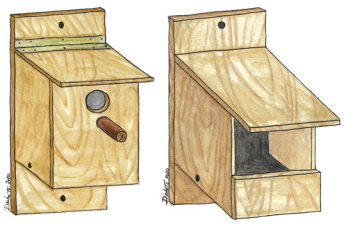
Design your *wild garden*

Draw in the box how you would like the school's wild garden to be realized.
Put the elements in the legend in the space below, in order to form a wild garden.

Scale 1:200

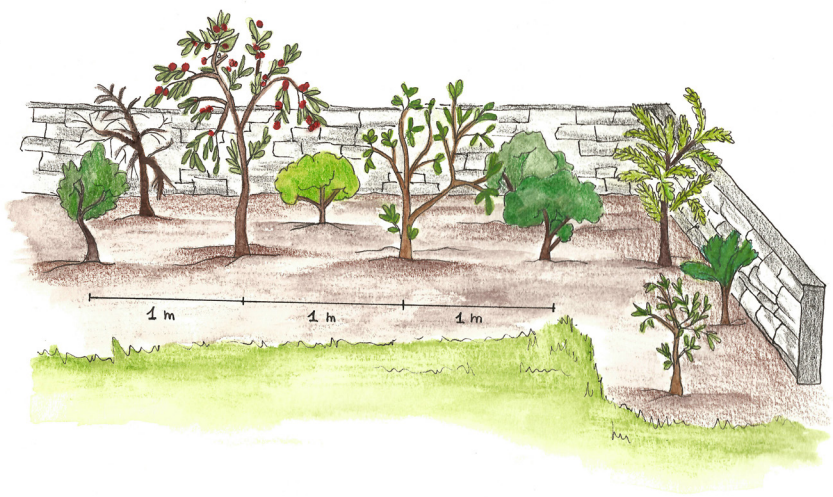
Design your *wild garden*

Legend:
items to be included

Hedge 	Drystone wall 
Aromatic plants 	Woodpile 
Spontaneous herbaceous flowery plants 	Shelter for hedgehog 
Bug hotel 	Shelter for toad 
Mangers for birds 	Pond 
Nest boxes 	Bat box 

Realize *the hedge or the flowerbed*

- Evaluate the available space
- Choose at least 4 plant species: the best hedges are made up of different plants, looking at the available spaces
- Place the plants, preferably in early spring or autumn
- Dig in the planting site, removing all infesting herbs and roots
- The hole to put each plant must be about twice the clod, where are the roots of the plant just pulled out from the pot
- Plant the shrubs at a distance of at least 1 meter from each other. It is also possible to arrange them in multiple rows, in order to make the hedge look as natural as possible
- Fill the hole and dab firmly without compacting the soil
- Once planted, give the seedlings a good watering to compact the soil



Shrubs to plant

- Hawthorn
- Blackthorn
- Wild Privet
- Hazel
- Rose Hip
- Wild Blackberry
- Holly
- Viburnum
- Honeysuckles
- Buckthorn
- Dogwood

Maintenance

- During the first year, shrubs need to be watered more frequently, especially in summer. Keep in mind that this may change, depending on the species planted and weather conditions
- Trimming consists in cutting dead branches damaged by winter

Needed equipment

- Gloves
- Wheelbarrow
- Garden hoe and big hoe
- Garden rake and big rake
- Spade
- Shovel and garden shovels
- Watering cans or hose for irrigation
- Seedlings shrubs
- Pruning shears

Realize a *pollinators attracting-*

Assign a part of the lawn to the spontaneous growth of the herbaceous species, and sow some autochthonous flowering species that attract pollinating insects in the other. Proceed in this way:

- Choose a sunny portion of the garden
- Remove, in early spring, the grass already existing and scratch the soil with a rake
- Spread the seeds and then cover them with loam
- Water slightly

Some of the spontaneous herbaceous species to be observed

- Clovers (Trefoils)
- Dandelion
- Nettle
- Papaver
- Cornflower
- Myosotis
- Fennel
- Carrot
- Oxeye daisy
- Carduus
- Goldenrod
- Viola
- Buttercup
- Hypericum

Maintenance

- Native plants require much less maintenance than the turf of an English lawn
- The lawn will need a small cut (height 5-10 cm), to be done between August and September, or anyway when the plants will no longer be blooming

Pollinators attracting species to be planted

- Vervain
- Hesperis matronalis
- Veronica
- Mullein
- New York aster
- Calendula

Needed equipment

- Gloves
- Wheelbarrow
- Garden hoes
- Garden rakes
- Spades
- Shovels
- Watering cans or hose for irrigation
- Seeds of native flowering varieties

Realize an *aromatic corner*

- Choose the sunniest garden place and, if possible, protected from draughts.
- Work the soil, hoeing it to a depth of 30 cm. If the soil is not fertile, add some compost.
- The planting must take place between March and April.
- The plants must be placed at a distance of about 60 cm from each other (this may change from species to species), on different rows, in order to avoid that they shade each other with the other during the growth.
- Make a mulch with natural materials such as straw and bark.
- Most species need water only if the soil is completely dry (see information sheet on the aromatics). Sprinkle, if needed, in the morning, make water flow on the surface of the soil and do not wet the leaves. The soil must be well drained.
- During the winter, protect the roots from excessive cold with a slight mulching of bark or straw.
- Place the aromatic herbaceous to the south.
- Water the aromatic herbs richly, only as soon as the plants has been put.

Species to plant (perennial species)

- Lavender
- Rosemary
- Salvia
- Thymus
- Mint
- Chives
- Yarrows
- Garlic
- Fennel
- Hyssop
- Lemon balm
- Red valerian
- Burnet-saxifrage

Needed equipment

- Gloves
- Wheelbarrow
- Garden hoes
- Garden rakes
- Spades
- Garden shovels
- Watering cans or hose for irrigation
- Aromatic seedlings
- Pruning shears
- Straw/bark for mulch

How to build an *insect-vacuum*

It's a method to collect insects using a jar with two pipes: one for suction and one to capture. Once the insect has fallen into the jar, it can be observed with the magnifying glass.

Some basic rules:

- Capture and handle insects with care.
- Avoid touching insects as much as possible.
- Place them in a shady place.
- Do not put different species in the same vessel, use one for each.
- Keep insects in captivity only for the time needed for observation.
- Release the animals at the same place as the catch.
- Minimise the number of insects caught

Needed materials

- Vessel: a plastic jar or a 0.5l plastic bottle
- Plastic tube: diameter 2-3cm, length about 20cm
- Sterile gauze
- Scissors or utility knife
- Tape
- Magnifying glass
- Notebook and pencil
- Insect's guidebook

How to build an *insect-vacuum*

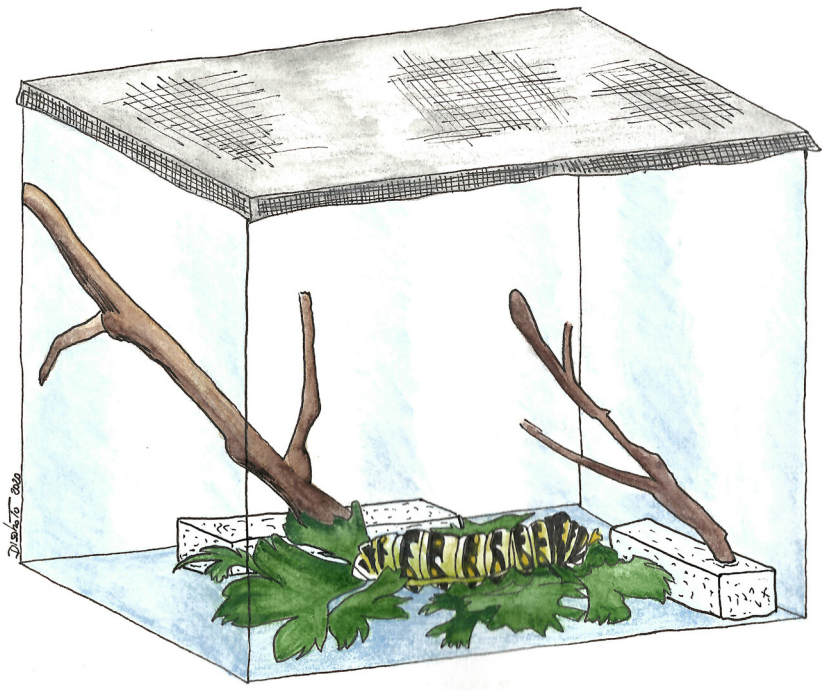
Get to work:

- Get help from an adult in this first step, because you have to make two holes in a jar or on a plastic bottle. Make two holes, with the scissors or with the cutter, on the vessel you have chosen. Should be about 2-3 cm in diameter (depending on the tube section you have available) and practiced at two different heights: one high near the opening of the container, the other lower and opposite.
- Get help from an adult for this step too: cut the plastic tube exactly in half, so as to obtain two equal parts of at least about 10 cm each.
- Place one of the two tube pieces inside the top hole previously drilled on the vessel. Remember that at least 2 cm of the tube should be put towards the inside of the bottle. Fix it outside with tape and close well any openings between tube and container.
- Apply a little gauze to one end of the other piece of tube and thread it into the lower hole in the container. The side closed with gauze must enter the bottle for about 2 cm. It will help to ensure that the moment the insect is aspirated, it will fall into the container without entering the tube! In this case too, fix carefully the tube, using tape.
- And now, what to do? Take the vacuum, go out into the garden, look for a small insect and as soon as you have found it, carefully approach to it the highest pipe. As soon as you're close enough, suck from the other tube down, and... CAUGHT! At this point your insect will be in the vacuum, ready to be observed with a magnifying glass! Write down in a notebook all your observations, which will be useful for the recognition of the insect.

How to breed a *caterpillar* and observe its *metamorphosis*!

Needed materials:

- Nurse plant
- 1 container: plastic box or glass tank
- Mesh net, as fine as that of mosquito nets (large enough to cover the container)
- Dry twigs
- Piece of polystyrene (example: lid of an ice cream tray)



How to breed a caterpillar and observe its metamorphosis!

What to do:

1. Get one caterpillar at least. If to realize your wild garden you have planted or sown those species that attract pollinating insects (see information/laboratory sheet on the hedge, aromatic corner and meadow), such as butterflies, it is not excluded that you may find caterpillars on some of these. As you know (see information sheet "Lepidoptera: attracted species") many species of butterflies are strictly linked to one or more nurse plants, feeding on their leaves at the caterpillar stage; this can permit you to find out more easily both the caterpillars and what they will have to feed on once "captured".

2. Place the caterpillar in a transparent plastic box or, if you have more than one, in a large glass tank (like that of an aquarium). The container must then be closed with a small net, in order to avoid the escape and at the same time ensure that they have a continuous exchange of oxygen.

3. Feed the caterpillar daily, with fresh leaves coming from the nurse plant. This is because leaves belonging to other plants, could not be eaten.

4. Clean the container daily from excrement to avoid the origin of mould, bacteria, and generally an unhealthy environment for the caterpillar.

5. Always be careful when the animal is handled for cleaning and replacement leaves, it is very fragile! Keep your hands always clean during this operation, to avoid transmitting possible bacteria or other dangerous microorganisms.

6. Prepare in the container, some dry twigs where the caterpillar can go to "settle" making the chrysalis. Fix the small branches vertically, piercing the polystyrene lid of an ice cream tray to be placed in the box.

7. Once the caterpillar has found a suitable place to turn into a chrysalis, do nothing else. So do not clean and do not put new leaves, just wait for the transformation into adult butterfly.

8. Once turned into an adult butterfly, wait for it to have completely spread the wings (even more than an hour) and free it in the garden, but only if it is a beautiful sunny day, not if it's rainy or windy!

How to build a *bug hotel*

To realize a “successful” bug hotel, the artificial shelter for our insect allies, we will have to keep in mind their needs: some guests will use it to shelter during the cold season, while others will use it to house their young.

Once the basic structure of the bug hotel is built, it will be “furnished” with some materials (natural and artificial) that will serve as accommodation for insects. It will be fine any type of hollow one or able to provide "small ravines".

Useful information:

- The bug hotel will have to be realized in a space of the wild garden as much as possible protected from the wind and exposed to the heat of the sun.
- It must also be protected from rain: make the bug hotel possibly under a shed or any other shelter, otherwise cover it with a special roof.
- Provide a net that contains the fall of small materials such as stones or pine cones.
- It is better to first set the most voluminous materials and then continue adding the smallest ones, so as to fill as much as possible all the empty spaces.

What do you need?

Natural materials

- Tree trunks already cut (to be drilled)
- Twigs
- Dry leaves
- Barks
- Straw
- Marsh reeds, bamboo canes
- Different size stones
- Pine cones

Other materials

- Wooden pallets (4-5)
- Hollow bricks
- Roof tiles
- Old flower pots
- Drill and bits (3-12 mm)
- Wheelbarrow (to transport materials)
- Metallic net
- Hammer and nails

Hot to build *a bug hotel*

Useful information:

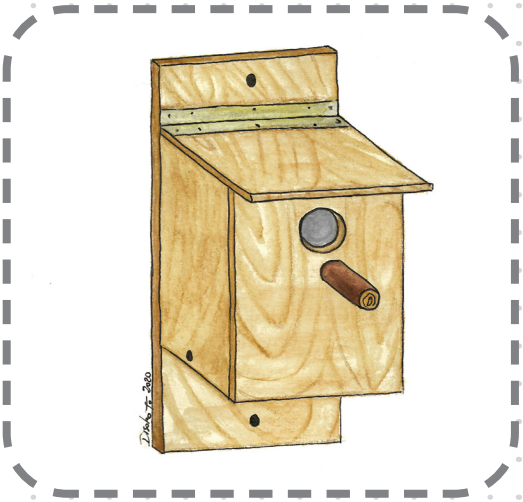
Some operations require the presence of an adult.

- Place the pallets on top of each other to form the structure that must be at least one meter high.
- Fill all the spaces of the structure, using the materials previously indicated according to your style. Remember that the purpose is to create as many ravines as possible.
- Hollow corridors with no exit are required as dwellings for lone bees and black and yellow mud dauber. Therefore, use marsh reeds and bamboo canes to fit inside the pots (so that they remain still), or drill wooden trunks, making holes of 4-12 mm in diameter and 12-20 cm long.
- For green lacewings, ladybugs and earwigs should be prepared accommodations protected from the weather, for example pots and various hollow bricks to be filled with straw.

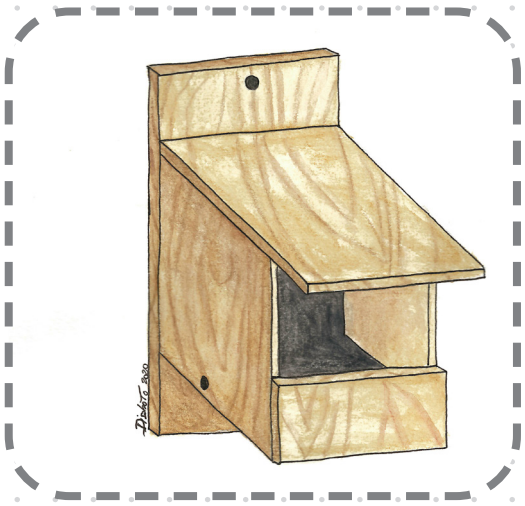
The *nest box*: realization and user guide

Each species of bird has different needs for nesting, there are therefore different types of nest-boxes. There are hole-shaped entry models for those species that nest in cavities, and open models for those that seek shelter without using hollows.
Here are the two main types:

Hole-shaped entry
used by:
great tit,
blue tit,
house sparrow,
common starling,
great spotted woodpecker,
wood nuthatch,
wryneck,
common redstart,
wren.



Open
used by:
robin,
white wagtail,
wren,
common blackbird.



N.B.:
There are species that you might see while they flutter in your wild garden, although they ***will not nidify*** in the nest boxes: common chaffinch, greenfinch, collared dove, blackcap, goldfinch, jay, magpie.

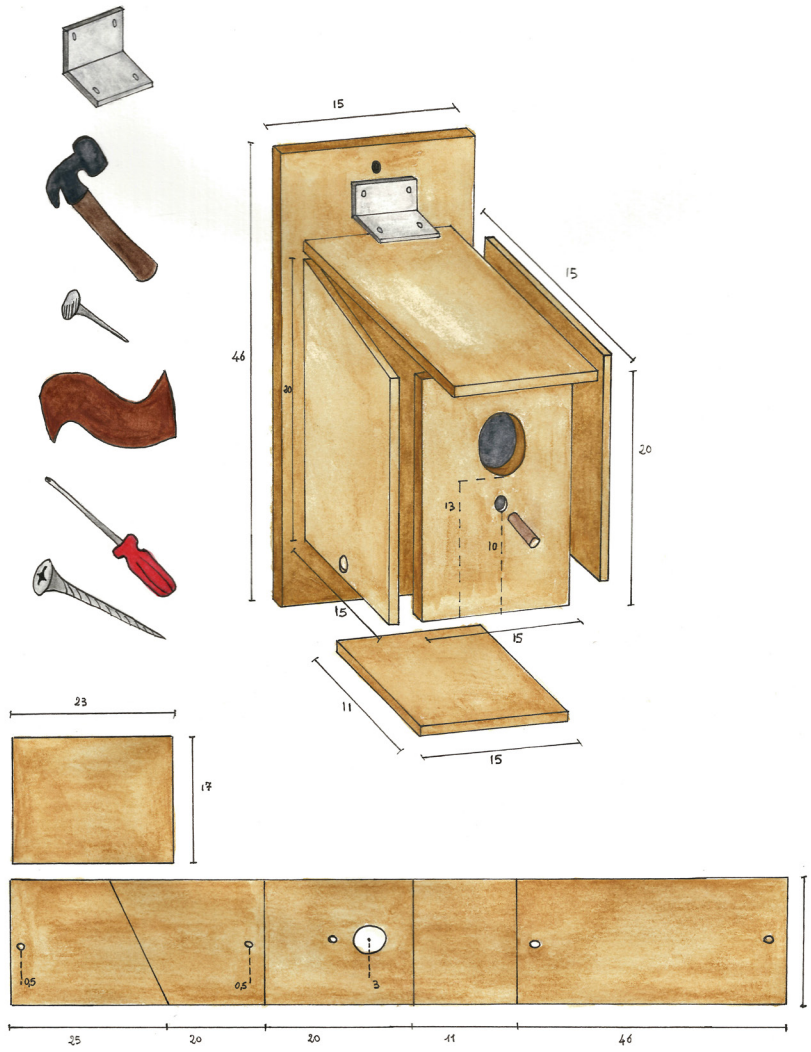
How to build a *nest box*

Materials

- Pieces of wood (poplar plywood of size shown below, ply about 2 cm)
- Sandpaper
- Hammer and nails (wide head)
- Screwdriver and screw
- 2 wall plugs to fix the nest box to the tree
- 2 stainless brackets

Plan

The following is a universal assembly plan for the shelter with an entry hole, whose dimensions allow to attract more species.



Right side
20 x 15 cm

Left side
25 x 15 cm

Front
20 x 15 cm

Floor
11 x 15 cm

Rear
46 x 15 cm

Roof
23 x 17 cm

How to build a *nest box*

Instructions:

- Make a hole 3 cm in diameter on the front piece of the shelter. Remember that the hole must be at a height of about 18 cm from the lower side of the piece.
- Rub all the pieces with sandpaper, to remove any splinters that could hurt you.
- Put together the different elements, following the shown scheme.
- Do not fix the roof with nails, but apply the hinge between the roof and the back of the shelter using screws (see the scheme). This will allow you to lift the roof and check the nest-box (see below "useful information").
- It is recommended to make some holes on the bottom, to allow the leakage of water that could enter in case of heavy rain.
- Fix a stick just below the entrance to serve as a perch.
- To protect the nest box from the weather and to lengthen its life, treat it with water-based brown woodstain.
- Apply the hooks to the centre of the nest box (one at the top and one at the bottom), and fix it on a tree.

Useful information:

- Place the nest-house from mid-winter to early spring, before the beginning of the nesting season, in sites protected from strong winds and rain.
- Monitor the nest box from a safe distance that does not make access to adult birds difficult. If they're scared, they might not get into, until they see someone nearby.
- Remove the nest boxes no longer utilized.
- Clean it in September-October, in order to keep it brushed until the following spring, for a new nidification.

The *manger*: building and user guide

During the winter season for many species of birds it will be less easy to find fruit on trees or even more difficult to catch insects. These species therefore change from necessity their diet, becoming omnivorous.
That's where you come in! You can help by making and installing feeders in your wild garden, and thus have the opportunity to attract and observe more different species.

What kind of food do they like?

Food	*Species attracted*
Corn seeds, hemp and chopped corn	Chaffinch, greenfinch, goldfinch
Sunflower oil	Chaffinch, greenfinch, tit, nuthatch
Sweet crumbs	Robin, tit, nuthatch, chaffinch, blackbird, starling, blackcap
Dried fruit	Tit, nuthatch
Fresh fruit	Blackbird, starling, blackcap, robin, blue tit
Fat and meat	Tit, starling, robin, blackbird

There are many different types of feeders on sale, all easily available.
Here we will explain how to build one, using recycled material. A double help to Nature!
But first of all:

Some useful instructions for installation:

- Should be placed away from strong winds and rain
- Possibly always near thick shrubs, bushes, hedges and branched trees
- Keep out of reach of cats and dogs
- Must be strongly fixed to a tree trunk or hung, without too long ropes that can cause a swing effect
- Keep always the food fresh

How to build a *manger*

Let's build a *manger* with the *tetrapak*

Materials

- milk or fruit juice carton
- cutter
- tape
- waterproof or water-resistant lanyard
- wooden stick
- leaves to decorate
- food (choose from the above list)

Proceeding:

- Wash and rinse carefully the tetrapak container
- Get help from an adult, and with the cutter, make on one of the wide sides a sort of window to insert food and where the birds will enter
- Drill a hole under the window and insert a wooden stick, which will be used as a perch. Fix it with tape if necessary, to avoid it moving too much
- Make one or two holes on the top of the container, and insert the lanyard that will be used to hang the manger
- Trim the manger if you want, using leaves to make it as natural as possible
- Now just hang up the manger, put food on, and wait for some birds to get close

Let's build a *bat box* together!

We can help the bats by realizing and installing a shelter for them directly at school.
Let's see together, step by step, how to build it!

Needed material:

For the realization of a wooden bat box, you will need slats and boards (measures reported below), minimum thickness of 1.5 cm. They should preferably be made of poplar plywood, better avoid conifers such as pine and fir because of the resin they produce.

- **1** board 40x8 (roof)
- **1** board 36x66 (rear wall)
- **1** board 40x36 (high front wall)
- **1** board 15x36 (low front wall)
- **1** slat length 36 cm, section 3x2 (upper)
- **2** slats length 48 cm, section 3x2 (side)

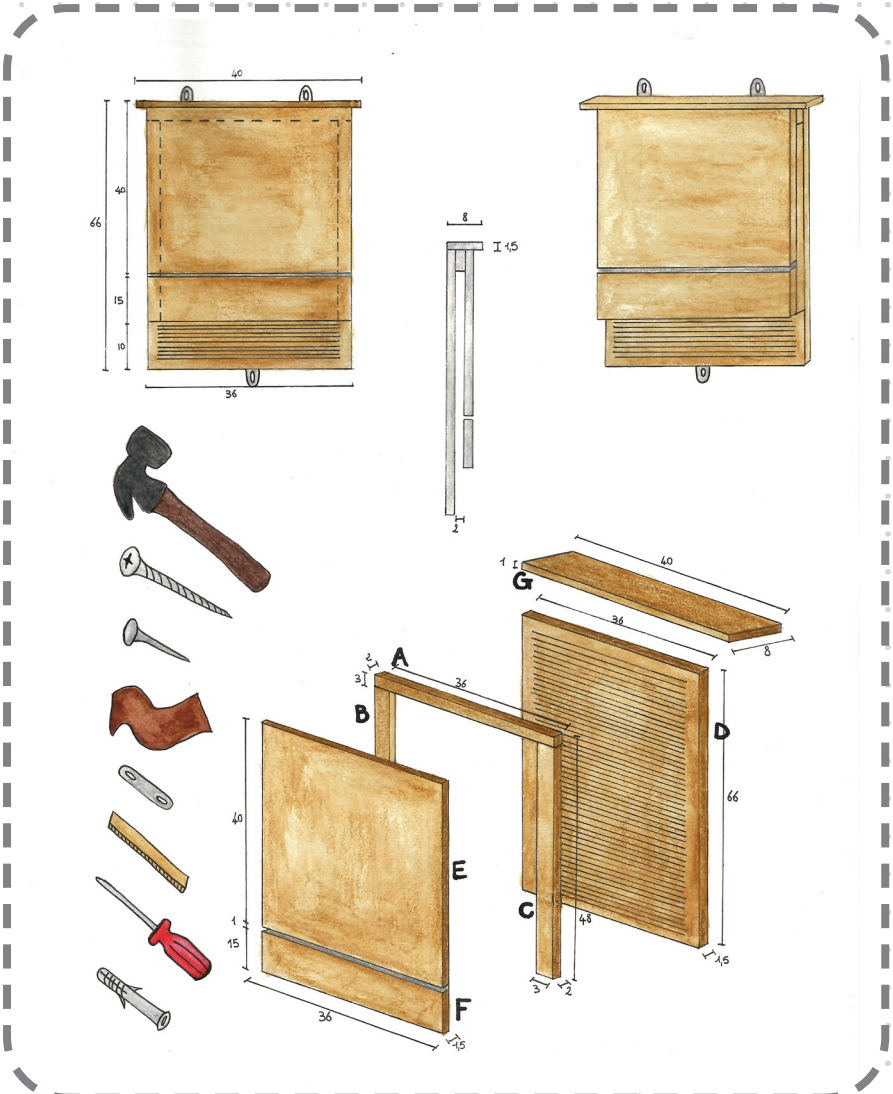
Necessary equipment:

- Sandpaper
- Hammer
- Nails (wide head, length 3 cm)
- Ruler
- Punch or screwdriver
- 3 plate hooks
- Screws to fix hooks to the bat box
- 3 plugs to fix the bat box to the wall

Let's build a *bat box* together!

Realization

- First of all, we suggest you to smooth all the pieces with sandpaper, to remove any splinters that might hurt you during their assembly.
- Once finished, take the boards and engrave small grooves (parallel and spaced of about 1 cm) a few mm deep, only on one side (the one that will then be placed internally), using an awl (or screwdriver) and a ruler. Bats will use them to climb, as by a ladder, inside the bat box.
- Then proceed to the assembly as shown in the image. We suggest that you assemble the rear wall first with the slats and then add the front wall panels. This will allow you to work more correctly. In order to avoid draughts, the bat box must be well built and never treated with fungicides or nitro-based paints.
- Once finished, we recommend applying a brown water-paint to the bat box, to protect it from the weather and lengthen its life.
- As soon as the paint has dried, apply the 2 hooks (one at the top and one at the bottom of the centre) and proceed to the placing on the school walls.



How to build a *hibernaculum* for reptiles

When autumn comes and the temperatures reduce, it's time to start thinking about how to help wildlife survive the winter!

For this reason, you could build a sort of elevated bed that will also serve as a hibernation site for wildlife. This facility is a home for wildlife, and at the same time, also provides fertile soil for your plants.

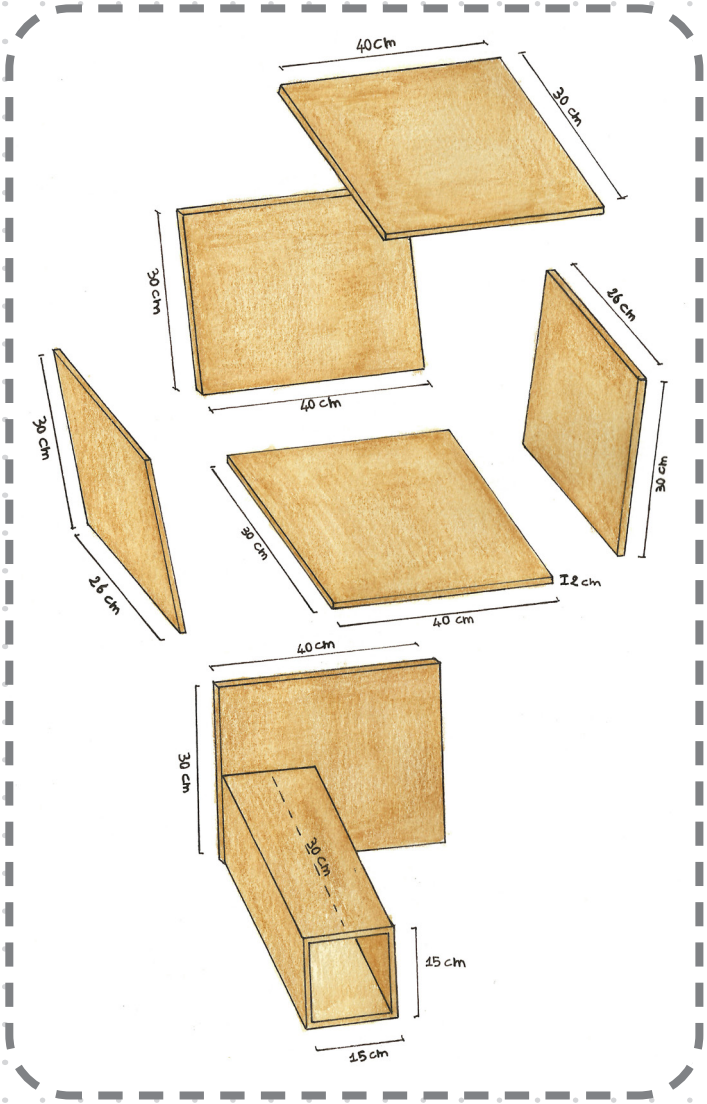
Here are the different steps to create one:

1. Choose a dry area, possibly where the raised bed will have high grass or other surrounding vegetation.
2. Draw an area of 1mt x 2mt (or larger if you prefer), with the long side facing south.
3. Remove the turf from this area and put it aside, then dig a trench 20 cm deep.
4. Now fill the trench with large logs, without a precise order, forming approximately a pile up to 1 m high. This will create "chambers" below the frost level, where reptiles, amphibians, and other species can hibernate.
5. Cover the pile of logs with smaller branches and twigs .

If you do not have the chance to dig a trench, just create a pile of logs or stones: it will be enough to host reptiles, mostly when they are active!

Let's build a *shelter* for the *hedgehog*

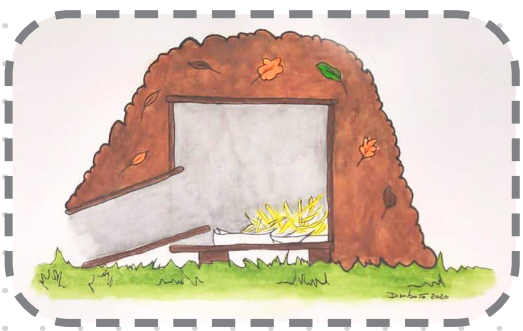
In a wild garden the hedgehog lives like a lord! It is a place that provides him everything he eats, where he can find shelter during the summer, and to face the winter in hibernation.
You can then build a suitable shelter using a plastic box or, with the help of an adult, taking hammer, nails and pieces of wood. The choice is yours!
Let's see now how to proceed:



Wooden box

Needful:

- hammer and nails
- untreated wood, thickness 2 cm
- 4 pieces of wood 40 x 30 cm
- 2 pieces of wood 26 x 30 cm
- entrance tunnel: 4 pieces of wood 13 x 30 cm
- plastic cloth
- straw, leaves, branches, soil, sawing



Put the pieces together, following the scheme below. Remember that the front piece of wood (40 x 30 cm) must have an opening equal to the tunnel (13 x 13 cm) that will allow the entry of the hedgehog.
Before finishing the construction, add some soil and sawdust to the floor. Once the box is done, put it in a protected place in the wild garden; under the hedge of shrubs would be excellent. Cover it with the plastic cloth and then with soil, branches and leaves, obviously leaning out the entry tunnel, where must be put straw and leaves.

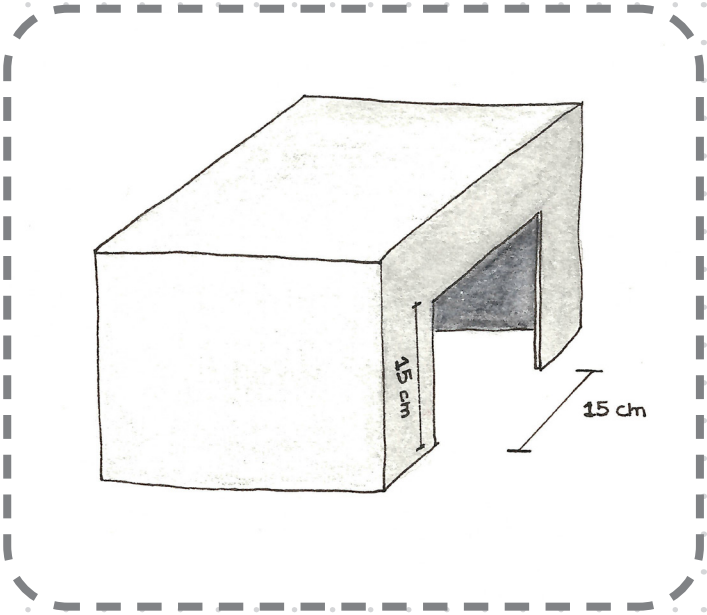
Let's build a *shelter* for the *hedgehog*

Plastic box

Needful:

- big plastic box
- cutter
- trash bag
- soil, leaves, straw, twigs

With the help of an adult, make on the plastic box an opening of 15x15 cm to enter the shelter, as in the drawing below.



Put the box in a protected place in the wild garden; under the hedge of shrubs would be excellent. Prepare a litter of dry leaves and straw inside, then cover the outside with a black trash bag, and finally with soil, twigs and other dry leaves, leaving only the entrance opening visible.

Remember:

There must always be a source of water in the nearby of the refuge, where the hedgehog can draw easily.

Let's build a *shelter* for the *toad*

You need to create the shelter in a shady and wet place in the wild garden, under the shrubs could be perfect. The shelter will not need a "floor", because the toad will surely dig and will therefore need to be directly in contact with the ground.
The best way to create a shelter is to use a terracotta pot, which remaining cool even in summer, will protect the toad from the heat.

You can dig a hole in the ground, not too deep, perfect to contain the terracotta pot placed horizontally. Be careful, the pot will not have to enter the entire hole, only half. The interior of the pot will have to be partially filled with soil, just enough to let in, get out and move the toad.

You can also build an above-ground dwelling. Place the terracotta pot upside down, over a circle created with rocks, leaving only space to allow the toad to enter and exit.

It could take a couple of days or even a few months for the toad to find and use the "house" you provided for. Be patient and don't look for any toad to take into the wild garden, it will come naturally!

Remember:

Even for the toad, there must always be a source of water in the nearby of the refuge.

Realization and maintenance of the *pond*

The realization of a pond inside the wild garden is a really useful project for nature. Creating one, small or large, will help to preserve the biodiversity linked to it, due to the drastic reduction of wetlands and consequently of the plant and animal species that inhabit it. You will see your wild garden filled with aquatic plants and invertebrates, amphibians and more; it will be exciting to see how much biodiversity can characterize even the smallest collection of water.

The following are two different ways of making a pond, depending on the space, time, materials and work required. So, you can choose the best for you! Come on, everyone at work!

Materials needed

- tape measure
- spade, also suitable for children
- shovel, also suitable for children
- hoe, also suitable for children
- rope and stakes
- * a sheet of non-woven fabric
- * a sheet in PVC
- * PVC tank, minimum diameter 70-80 cm
- wheelbarrow
- stones and logs
- sand
- water

**to estimate the size of the sheets, remember to consider the depth and area of the pond. The PVC sheet can be replaced by a PVC tank, which however has higher costs. Their usage is therefore alternative, being able to choose the most appropriate between the two ways.*

Planning

- Choose an open area of the wild garden, where there is little shade only at a specific time of the day. It should preferably be far from the trees, which in addition to creating too much shade, make maintenance difficult. During the autumn, the fallen leaves must be absolutely removed in order to avoid that their decomposition takes away oxygen from the water.
- There is no minimum size planned for your pond. In nature, there are sheets of water of all sizes, so even a small pond is a valuable habitat for wildlife. So, choose freely how large you want to make it, taking into account the space, time and workforce you have available.
- The depth must be between 40 and 80 cm. If the water level does not reach at least 40 cm, it will be more difficult to host different species, because it will heat and cool too easily, allowing colonisation by only a few organisms.
- The banks must slope gently and gradually, in order to allow to the animals that will populate and live in, to enter and exit the pond with ease.

Realization and maintenance of the *pond*

Realization

- If required, define with rope and stakes, the area that will be subjected to digging.
- Start digging with spade and hoe, putting aside the dug soil, which will then be recycled to raise an edge of the pond.
- Remove stones, woods and everything that is located on the bottom of the dig, to prevent stones or roots from piercing non-woven fabric and PVC (if you decide to use them).
- Once the excavation is finished, place the non-woven fabric sheet on the bottom and then the PVC waterproof one. Remember that the PVC sheet must be larger than the size of the digging, because it must be folded and the edge must be buried.
- Now it's time for water: the best choice is not to add it, and wait for the pond to fill naturally thanks to the rain. If instead you decide to build the pond in a low rainy season, then you can add water, better if it comes from a well.
- Place stones and trunks around the edges of the pond, in order to create habitats suitable for its future guests.
- If the banks are particularly steep, you can place mesh nets (in hemp or other natural material) that will help the sediment to stop.

Placement of non-woven tissue on the digging carried out.

Placement of non-woven tissue on the digging carried out.

Tank option

If you use it instead of the PVC sheet, simply remove any stones and woods once the excavation is finished, put a layer of sand (if available) and place the tank. Finally fill the edges between the tank and the excavation with the resulting soil.

Yes, a *pond*! But without too much work...

Materials needed

- spade, also suitable for children
- shovel, also suitable for children
- * PVC tank, minimum diameter 70-80 cm, minimum depth 40-80 cm
- Non-woven fabric
- wheelbarrow
- stones and logs
- sand and soil
- water

**to estimate the size of the sheets, remember to consider the depth and area of the pond. The PVC sheet can be replaced by a PVC tank, which however has higher costs. Their usage is therefore alternative, being able to choose the most appropriate between the two ways.*

Realization

- Choose a flat area of the wild garden and work a little the soil to level it if necessary. Remove any stones, woods and what could affect the stability of the tank.
- Lay a layer of sand on the bottom if available, or one of non-woven fabric.
- Place the tank.
- Proceed with filling with water, following the same rules as in the previous example.
- Put some sand on the bottom of the tank, and place stones and woods to allow the animals to get out.
- The tank is not buried, so it has high edges that make it difficult to access some animals, especially amphibians. It will then be necessary to put stones around the edge, in order to create continuity with the surrounding environment and give way to the animals to be able to easily enter the water. It is then possible to cover some rocks with the soil, to allow the development of vegetation.
- In addition to the soil, place stones and trunks around the edges of the pond. They help the access of amphibians and also the creation of shelters.

Maintenance - useful for both examples -

- Check that the water level is not too low, especially in summer; this could compromise the balance of the pond and the presence of animals.
- In autumn you have to clean the pond: remove the leaves and reduce the aquatic vegetation if it has grown too much (both on the edges and in water). Floating species, for example, if present in excess can subtract light from submerged ones.
- In winter avoid complete freezing of the surface, possibly providing some tap water.
- Do not make any action in the spring, because you may disturb the animals during their reproduction and egg-laying period, with the risk that they will leave the pond.

Useful information

Let nature take its course! The best choice is to wait for the colonization of the pond by plants and animals in a natural way. DO NOT introduce animal species from the environment and in particular DO NOT introduce fish and alien species!