Q: My school doesn't have a green area. Can I still attract nature to my school?

Many schools in Malta lack a garden patch, so your problem is faced by many teachers who wish their school to be more wildlife friendly. Luckily, you can attract nature anywhere and your school is no exception.

Basic needs

When thinking nature, what we must keep in mind is **food chains**. Food chains begin with plants, so if we have plants we'll get the creatures that feed on them. Our aim here is to create a space where plants can grow.

Plants need sunlight, air, water and minerals. They get the first two by standing outside, and the other two from the ground. This means we need an outdoor area where we can spread some soil. If you don't have a green patch in your school you will need to create it.

Planters

The best and most drastic way is of course to pull up a section of school yard, fill it with soil and plant it up! At least one school we know is doing this, but of course not all schools may be enthusiastic to do the same, so the next best thing is planters. Planters are large flowerpots, and they come in various shapes and sizes. We find the larger rectangular kind (Fig. 1) are best suited, as they can contain more soil and waste less space – space is a precious commodity especially with our smaller schools.

Find a nice quiet corner of your school yard (Fig. 2) and mark it off for your project. Make sure the spot is child-safe, so ideally away from play areas. The place will need to see sunlight at least for a few hours every day, and a nearby water source (well or tap) would be convenient.

Next, buy the planters (garden shop or home and DIY store). Buy them as large as your budget can afford – better four large ones than eight small ones – and place them in your project area. It would be nice to bunch them together to look like a small garden, BUT on the other hand it's important that each planter is accessible (for watering, observation, etc.). So leave a few gaps for people access, as in Fig. 3.

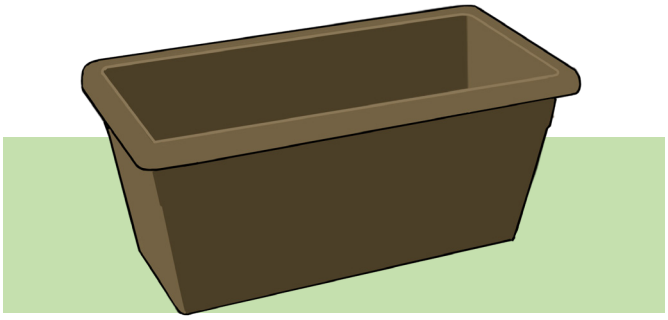


Fig. 1. Rectangular planters are best

Starting the process

Place stones, pebbles or broken pottery at the bottom of the planters so water can drain better. If you bought matching saucers with the planters, use them and spare yourself puddles and muddy ground.

Next, fill the planters with soil. If you don't have access to soil you can ask kids who have a garden at home or a green area nearby to bring a small bag of soil for your pollinator

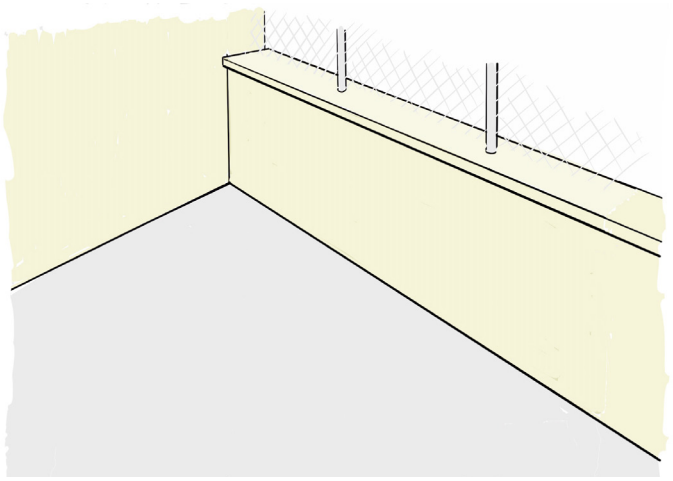


Fig. 2. A nice quiet corner

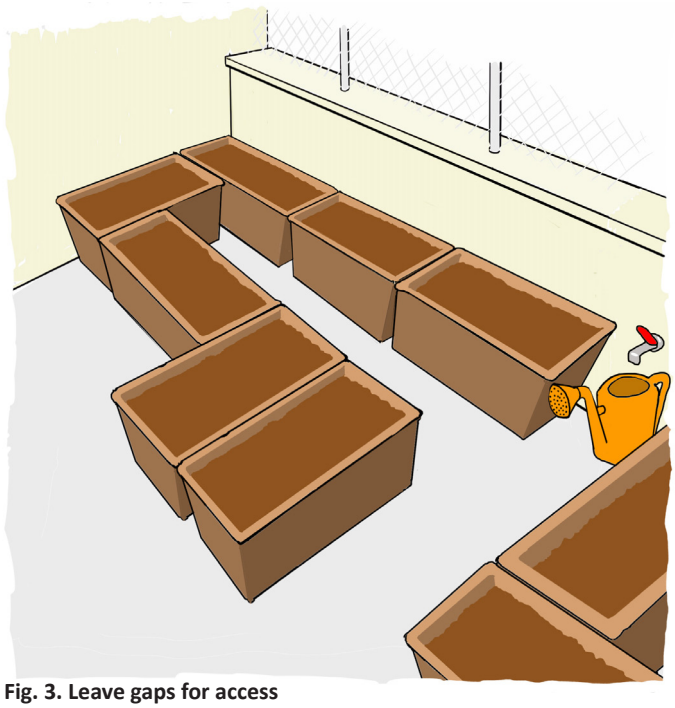


Fig. 3. Leave gaps for access

project. Or buy bags of soil from *Ħamrija għall-bejgħ* (on Fb) Meanwhile buy a couple of bags of potting compost. (NOTE Check on the bag that the compost doesn't contain peat! Peat bogs are a globally endangered habitat.)

Mix half and half quantities of soil and compost in each planter. You can use compost alone but it will probably be lacking in calcium, which Maltese plants are used to.



Compost

Incidentally, you can make your own rich compost from kitchen scraps and other organic waste. For this, however, you do need a bit of garden space. If you do use home-made compost, mix only 10% with soil, as it's stronger than the compost you buy.

As if by magic!

What to plant? One thing that's fascinating and almost magical about soil is that even if you plant nothing, chances are your planters will soon sprout plants on their own (Fig. 4). It's not really magic of course: those plants are growing from the thousands of seeds already present in the soil. These seeds were most likely blown there by the wind from their parent plants, and were waiting for the right moment to sprout.

For best chances to watch this happening, have your planters ready by early autumn, say, end of October, as this is the time when most seeds start to 'wake up' when the first rains fall. Naturally, if it hasn't been raining, water the planters once or twice a week. No need to flood the soil, with the larger planters a couple of litres should do the trick.



Fig. 4. All wild, nothing planted! There are at least five species of plants growing in this planter.

Involve kids every step of the way, and get them to watch for any sign of sprouting greenery. Keep notes and dates, make charts, take pictures, observe the different leaf shapes and colours, label with kebab sticks and colour flags. No need to try and identify the plants at this stage: if the kids can appreciate the variety, it's already enough.

Annuals

The species growing on their own will very probably be what most people call weeds, that phrase we hate so much: *ħaxix ħażin*! So here's the perfect opportunity for the kids to learn to love these hardy wild plants and appreciate beauty even in small things.

Species you may find growing on their own may include the following:

- **annual mercury** *(burikba)*
- **pellitory-of-the-wall** *(xeħt ir-riħ)*
- **nettle** *(ħurrieq)*
- **crown daisy** *(lellux)*
- **white mustard** *(ġarġir abjad)*
- **honeywort** *(qniepen)*
- **common poppy** (peprin aħmar)
- **fumitory** *(daħnet l-art)*
- **cape sorrel** *(qarsu)*
- **white mignonette** *(denb il-ħaruf)*
- **borage** *(fidloqqom)*
- **scarlet/blue pimpernel** *(ħarira ħamra/kaħla)*
- **smooth sow-thistle** *(tfief komuni)*
- **boar thistle** *(xewk abjad)*
- **friar's cowl** *(garni tal-pipa)*

These plants are called annuals because they have a short life of eight to nine months. And what's really great is that their lifespan coincides perfectly with the scholastic year: sprouting, leafing and growing through autumn and winter, flowering in spring, and producing seeds as summer approaches. This is an excellent opportunity for children to follow closely the life cycle of plants as it unfolds in front of their eyes.

Visitors

The most exciting phase is of course the flowering period, which in most plants happens from February to April. It's the most interesting time not only because flowers are the most attractive part of the plant, but also because this is the time when insects visit plants to get at the nectar and the pollen. Visitors can include **bees**, **wasps**, **hoverflies**, **butterflies** (and **moths**), **beetles** and **bugs**. While

visiting the flowers, the insects unknowingly pollinate the flowers, which is vital for the production of seeds.

Limitations

Right! So with just an "empty" planter you can already watch nature at work. But you may probably wish to hurry things up a bit and not leave everything to chance. Which means doing some actual planting. So what to plant?

Planters have their limitations, we can't just plant anything in them. Forget trees and large shrubs – big plants need space to grow roots deep and wide into the ground, and planters are neither deep nor wide. It's true we often see trees in planters around town, and they may look healthy for a few years. But eventually their roots hit the side or bottom of the planter, curl back on themselves and the young tree sickens and dies – there is just no space for them to grow (Fig. 5). Local Councils don't mind, they simply replace the dead trees. But we *don't want* our plants to die! We care about living things and we want to spread this caring attitude among children.



Fig. 5. No space to grow

Another downside with planters is that they tend to heat up and dry up faster than a patch of ground. That's because, unlike the ground, all sides of a planter are exposed to the climate. That means they will need more watering in the dry months.

Native or alien?

Luckily, many plants can live happily in a planter. Now there are **native** plants and there are **alien** plants. Native plants are species that have always lived in Malta, alien plants are species that were brought into the country by people.

When planting in a natural habitat, we always avoid alien species so as not to create competition with the native flora. But in our pollinator project, which is isolated from the countryside, our plants are not going to compete with the flora growing out in nature, so there is no need to be so strict. Where possible, native species are always preferred because it's good that children learn our native flora. But some alien species are so attractive to insects that it would be a pity not to plant one or two along with the rest!

Here is a selection of flowering plants that can grow in planters. All except one are native species.

LOW SHRUBS

- **golden samphire** *(xorbett)*
- **Maltese rock-centaury** *(widnet il-baħar)*
- **great sage** *(salvja tal-Madonna)*
- **rosemary** *(klin)*
- **silvery ragwort** *(kromb il-baħar isfar)*
- **greater snapdragon** *(papoċċi ħomor)*
- **Sicilian snapdragon** *(papoċċi bojod)*
- **sweet alison** *(buttuniera)*
- **yellow wall-rocket** *(ġarġir isfar)*
- **lantana** *(lantana)* - alien species
- **hoary rock-rose** *(ċistu roża)*
- **narrow-leaved rock-rose** *(ċistu abjad)*

TALLER PLANTS

- **fennel** *(bużbież)*
- **Maltese ferule** *(ferla)*
- **alexanders** *(karfus il-ħmir)*

BULB or RHIZOME PLANTS

- **sea squill** *(għansar)*
- **branched asphodel** *(berwieq)*
- **narcissus** *(narċis)*
- **sea daffodil** *(pankrazju)*
- **gladdon** *(fjurdulis tal-bosk)*

Planting saplings

Planting *(taħwil)* is when you put a young plant (that already has roots) in the soil. We can call it a sapling.

To plant your sapling, make a hole in the soil with a garden trowel. Make the hole roughly as wide and deep as the flowerpot your plant came in (Fig. 6).

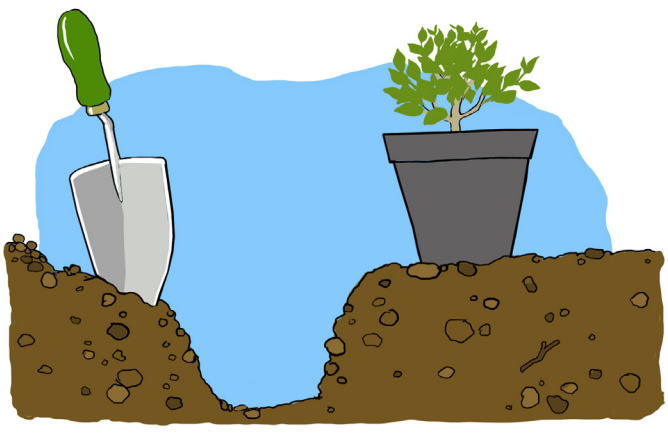


Fig. 6. Wide and deep as the flowerpot



Fig. 7. Carefully coax the plant out of the pot

Next, tip the pot upside down and carefully coax the plant out of the pot (Fig. 7). Try not to break the ball of soil so you won't expose the roots. Place the plant in the hole, fill around the spaces with soil, and gently but firmly press the plant into place. Dig a shallow trough around the plant and water it at once – no need to flood, just enough to help the two soils to bind and mix.

The best time for planting saplings is autumn so that winter rain can take care of your young plant. But if you commit to regular watering, you can plant even in high summer.

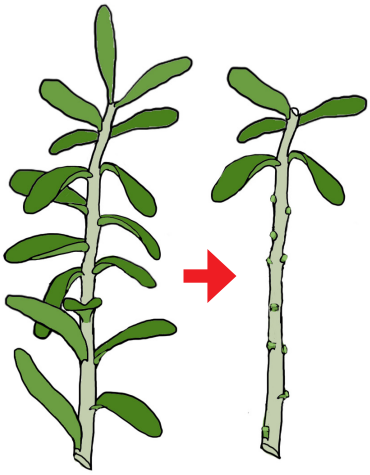
The advantage of planting saplings is that from day one you can actually see the living plants in the soil, something to point out to children and visitors. Also, young plants already have roots, so they stand a better chance of staying alive.

The downside is that young plants will probably need to be bought, so you will need to budget for that. Unfortunately, most garden shops do not stock much native flora, though BirdLife can direct you to one or two good sources.

Incidentally, when visiting most garden shops, do not let the brightly-coloured flowers fool you into buying. Apart from being almost certainly all alien, most plants on display will probably be sterile, which means their flowers will have no nectar or viable pollen. They will be useless for your pollinator project, as they will not attract insects. Remember, the whole point of our project is to increase nature in the school, not simply to have an ornamental garden.

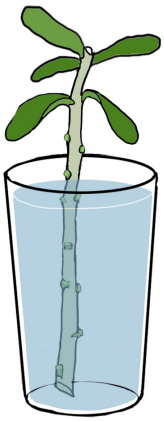
Planting cuttings

A cutting *(bil-biċċa)* is a twig you take from an established plant in order to grow a new plant from it. This is known as propagation. Several woody plants can grow from cuttings, which is great because taking cuttings will cost you nothing. You may, however, need a few tips for best chances of success. See Fig. 8 for a step-by-step guide.



1

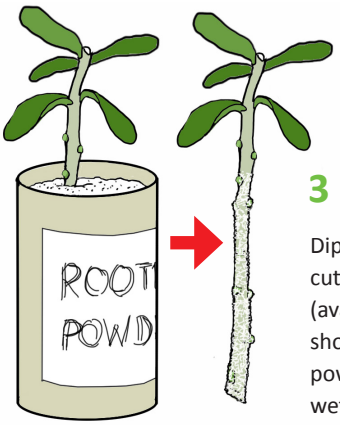
The best time to take and to plant cuttings is the colder months (Dec to Jan), when woody plants are relatively dormant. Using scissors, knife or secateurs remove all leaves from the lower two thirds of the cutting. Don't pull them off so as not to damage the stalk.



2

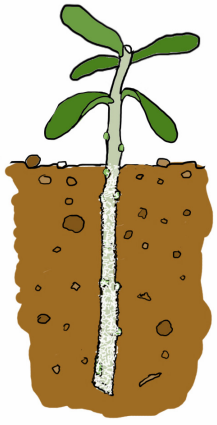
Wet in water the leafless part of the cutting.

Some cuttings will sprout roots readily if placed in water for a few weeks. Experiment with different plants. Naturally, if your cutting sprouts roots you can skip Step 3.



3

Dip the wet part of the cutting in rooting powder, (available from garden shops or pet shops). The powder will stick to the wet stalk.



4

Push the cutting two thirds of the way into the soil. Or poke a hole in the soil with a pencil and stick the cutting in. Press the soil firmly down around the cutting.

Make a shallow trough around your planted cutting and water it.

Fig. 8. Step-by-step to planting of cuttings

Sowing seeds

Sowing *(żrigħ)* is when you put seed in the soil. Several plants are easy to harvest seeds from, such as fennel, crown daisy, white mustard, perennial wall-rocket, poppies, Maltese ferule, snapdragons and alexanders (Fig. 9).



Fig. 9. Some species are easy to harvest seeds from

The best time to sow seeds is autumn. In nature, seeds just fall to the ground, they don't bury themselves in a hole. So all you need do – especially with tiny seeds like poppy or snapdragon seeds – is sprinkle the seeds on top of the soil in your planter, and cover with a thin layer of soil. A more controlled method, especially if you have few seeds or if the seeds are a bit larger. is to poke holes with a pencil (Fig. 10), maybe 1cm deep, drop one or two seeds in each hole, and cover it up.

To avoid wild plants growing among your seeds and taking up all the space, you can use a seed tray with compost until your seeds start growing (Fig. 11). Unlike soil, gardening compost will not have wild seeds in it so there will be no competition.



Fig. 10. Poke shallow holes with a pencil



Fig. 11. A seed tray will help keep things in control



Fig. 12. Scoop the seedling out with a spoon

When the young seedlings sprout, use a spoon to scoop them out – complete with root ball – and transfer them carefully to your planter (Fig. 12).

Water the area gently with a small watering can. Maybe once or twice a week should do until the rainy season sets in, then you can leave the rest to nature.

The downside of sowing is that you don't see much for the first few weeks, plus there is no guarantee that the seeds will actually sprout. But if and when they do, it will be so much fun and satisfying for the kids to track the life cycle of 'their very own' baby plants from the very beginning.

Record

Keep a record of what you are sowing and planting, maybe by sticking labels on kebab sticks in the soil. Or you can number the planters, then with the kids create 'maps' of each planter with the new plants drawn in and labelled.

If you don't keep record, you will easily forget what went where. But even if you have an elephant's memory it's still good science practice to keep record of your activity.

A proper green wall

If you have a high wall that's not in the play area of the school grounds and you want to nature it up, check with your school admin whether there's any chance of creating a small trough *(konka)* or two in the actual ground. It will entail removing a couple of tiles, removing the underlying rubble for maybe 30cm and replacing it with soil. Now you can plant a great climber or creeper.

If you want butterflies visiting, your best bet is **plumbago** (*pjombina* or *ċelestina*). It will grow and fill your wall with bright green leaves and masses of pale blue flowers that are a magnet for the small blue butterflies. These butterflies also lay their eggs on plumbago because their young feed on its leaves. How cool is that!

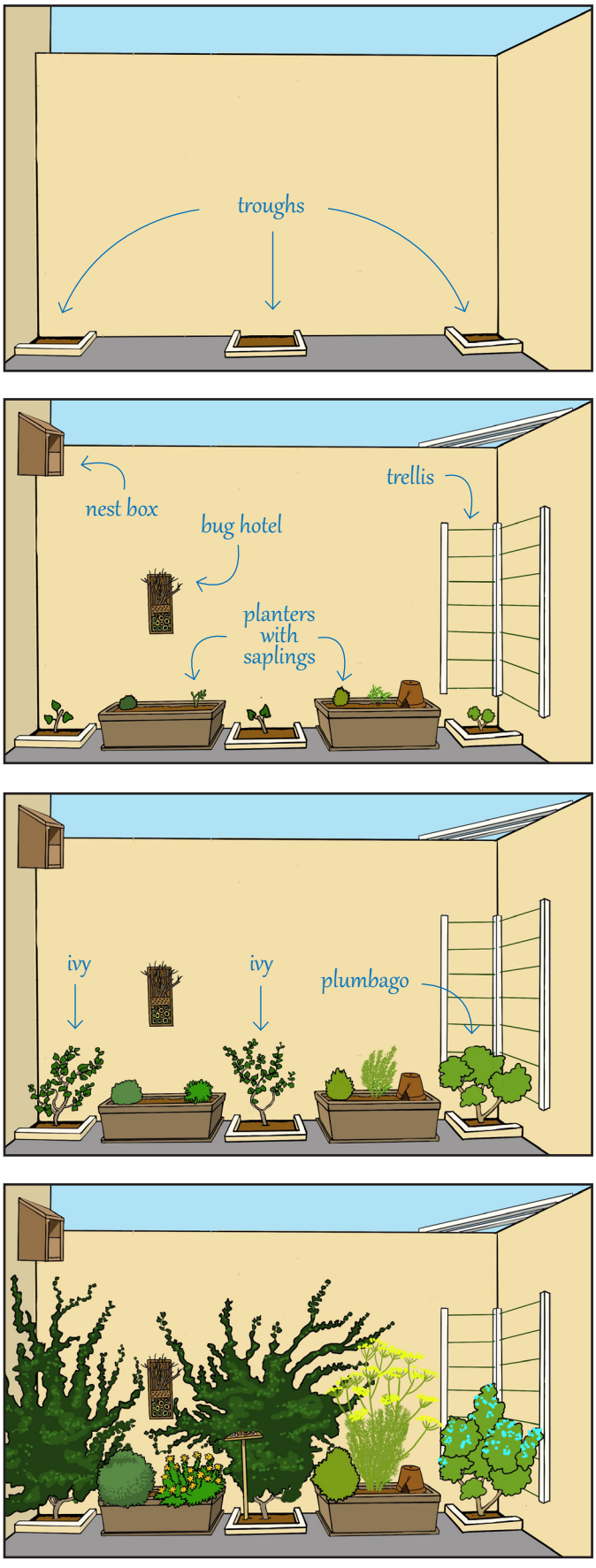
Another good candidate is **garden honeysuckle** *(ħanisakil)*, with darker leaves and white or yellow flowers. It is a vigorous grower.

Both these plants will need some help if you want them to cover the wall. In order to grow they will need something to grapple on, like netting or trellising or a few nails with string across.

If your wall faces north-west, north or north-east, there's one plant that will cover your wall free of charge or effort, and that's **ivy** *(liedna)*. Ivy literally glues itself to the wall and grows without any help from your part – except of course for a little watering. In a few years you'll have a wall of dark foliage, which is very exciting habitat for insects, small spiders and even birds. Ivy's autumn flowers attract bees and wasps, and their berries in winter may bring birds like robins, starlings and blackcaps to feed on them.

Additional structures like bug hotels, bird tables, nest boxes, stone piles, etc. will create more habitat for more minibeasts. The illustrations on the right give an idea.

And there's your genuine natural green wall! Not the high-maintenance, complicated, water-wasteful so-called "green wall" installations, which are as artificial as they are expensive and plastic-intensive. Your only expense would be to pay the worker who created your trough (unless your school handyman volunteered to do it), and the price of the sapling, unless of course you grew it from a cutting!



You can find more information about plants, insects, birds and other nature in other Dinja Waħda resources at our dedicated website
https://dinjawahda.birdlifemalta.org/

© BirdLife Malta 2023 • Text and illustrations Victor Falzon • Photography Victor Falzon, Desirée Falzon