

WE ARE GROWING.

WE ARE NEWHAM.

Newham Food Growing Toolkit

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THANK YOU

This toolkit aims to support you to start a food garden at your school.

It was written with support from teachers and staff from Colegrave Primary School, Central Park Primary School, Keir Hardie Primary School, St Winefride's Catholic Primary School, Southern Road Primary School, 360 School, Portway Primary School, Salisbury Primary schools, Gallions Primary School, 21 School, and Drew Primary School.

As we learn and grow together we will update and improve this resource to create the best possible tool for our children, teachers and schools to use.



Written by Patrick Vickers
Additional contributions by Eleanor Watts
Edited A Gold & L Prieto

WHY GROW FOOD AT SCHOOL?

Eating Healthy Food and the ‘Whole School Approach’ to food

In 2013, the School Food Plan was published to set out what a good school food culture looks like, and to transform school food for the better. One key recommendation was for schools to take a ‘Whole School Approach’ to food. This means showing what a healthy food culture looks like at every opportunity - whether that’s through the food at lunch, what happens in the classroom, or through growing some food at school.

The ‘Whole School Approach’ to food recognises that children need spaces where they can learn and grow to love the food they need to be healthy and thriving. Nurturing a deep-rooted connection to healthy food is the best way to prepare them for a world in which making good food choices is a challenge. Growing food in a school garden can be a great way to contribute to your school’s ‘Whole School Approach’ to food, and should be seen as part of a wider push for children’s health.

Studies have suggested that when children are involved in growing fruit and vegetables, it increases their willingness to eat these foods. Teachers in Newham have come to the same conclusion. One teacher we spoke to explained how a classroom project that involved showing the stages of food helped build curiosity and more willingness from the children to try healthy food. Steve Modini from 21 School told us how:

“If you just put a vegetable in front of a child, they may not eat it. But when you build up to it by showing all the stages of the food preparation - from growing, to harvesting, to washing, to cutting up the vegetables - to finally, eating, all the children involved ate the food”.



Seedlings planted by children at Keir Hardie Primary School

WHY GROW FOOD AT SCHOOL?

We are Growing: A priority for Newham

Local food growing is a big priority for Newham. It is now an [Eat for Free](#) grant principle and is part of the borough's [50 Steps to a Healthier Newham](#) with part of 'creating a healthier food environment' broadening access and increase participation in good growing.

Health and Wellbeing

Health and wellbeing is not only about eating healthy food. The experience of growing food is more important than the amount of food grown. By connecting to nature, food growing can be a vital health measure for the whole community. Many local community leaders at our schools and GP practices have already recognised what an amazing impact gardening and connecting to nature can have on our health and wellbeing.

Teachers across Newham's schools have started gardening at school for the health benefits to children. One teacher told us:

“We include the garden in the curriculum, but try to make sure it’s particularly part of certain children’s plans. We noticed that some of the more vulnerable children and children with special educational needs seemed to really benefit from time spent in the garden. We started to prioritise these children’s gardening times, using the garden as a healing space, and have seen a really positive response.”

Local East London GP [Sir Sam Everington says](#) “gardening is probably THE most important thing you can persuade any patient to do. It’s creative, it creates wellbeing, it’s great for mental health.”

If you are considering starting a garden, remember you are taking an important step towards better health for your community - even if you don’t grow much food.

WHY GROW FOOD AT SCHOOL?

Green space tackles Health Inequality

Often, green spaces are considered a 'nice-to-have' for a community, but not crucial. However [studies](#) have shown that green spaces are crucial for community health. A famous [study](#) on the links between health and access to nature found that greater access to nature led to less health inequality. This means connection to nature is a tool we can use to protect our community against the harmful health impacts of deprivation. The authors of the study suggest that access to nature reduces health inequality because it can act as a freely available way to reduce stress levels.

So how does this play out in Newham? Newham scores an E in [Friends of the Earth's Access to Green Space map](#), meaning our neighbourhoods are "most deprived of green space". This isn't just a 'nice-to-have'. Connection to nature is crucial for health and wellbeing. We can overcome this challenge by making the most of the space at our fingertips. All the more reason to help make Newham's schools green beacons of food growing!

How to maximise the health benefits of your green space



MOVEMENT

Gardening is a form of exercise, whether through weeding, digging, carrying water, or other activities. Regular [physical activity](#) reduces the risk of having health problems.



SOCIAL CONNECTION

Using the garden as a way to bring people together is good for our collective health. Loneliness is damaging to physical and mental health. A recent [study](#) even suggested "prolonged social isolation and loneliness" has a similar impact on life-expectancy to "smoking 15 cigarettes a day". Could you use your food garden to engage with your community and create more social connections?



AWE

[Research](#) has shown that feelings of awe make people feel more connected to each other, collaborative, and kind. Can you use your garden to inspire feelings of awe? Can you take a moment to appreciate the birds and insects? Can you think of the trillions of soil microbes helping plants grow? Can you appreciate the emergence of a shoot from a seed? The more you can inspire others to feel awe, the more health benefits your garden will produce.

GROWING IN NEWHAM

What grows well in Newham?

Different plants survive and thrive in different temperatures and climates. To have a successful garden, it's important to choose plants that are likely to grow well here. Although we certainly can't grow bananas or mangoes, there are lots of exciting and interesting foods that grow well in Newham.

We spoke to Newham teachers that grow food and Newham community gardeners. They said their favourite things to grow in Newham are:



CARROTS



CHILLIES



POTATOES



PARSNIPS



KALE



BROCCOLI



TOMATOES



LEEKS



ONIONS



PUMPKINS



SQUASH



SWEET PEAS



CHARD



COURGETTES



RASPBERRIES



STRAWBERRIES

Do you have a food growing success not on the list above in your garden?

We'd love to hear from you at SMARTFood@newham.gov.uk so that we can add it to our list above.

GROWING IN NEWHAM

Hardiness Zones

You could also decide what to plant by checking Newham's 'Plant Hardiness Zone'. This is a way of knowing how cold it usually gets and which plants are likely to grow well in your area. You can use this plantmaps.com to find out what plant hardiness zone you are in. It lists Newham as Zone 10a, meaning minimum expected temperatures are -1.1°C to 1.7°C . However sometimes it does get colder than -1.1°C , so to play it safe you might want to choose zone 9b plants, which can survive -3.9°C .

Did you notice that large parts of London are warmer than the surrounding areas? This is because of the urban heat island effect. Concrete absorbs the sun's heat during the day, and releases it at night, making cities hotter overall.

Asking others

One of the most magical things about gardening is connecting to other gardeners and solving problems together. If in doubt, why not chat to local gardeners and see what has worked well for them? An experienced gardener on your street will probably be more helpful than a website because they will know more about local conditions and they will have learnt from experience in the local area.

You can connect to local growers in your area by:

- Visiting a local allotment and talking to people
- Keeping an eye out for local gardens where food is growing
- Engaging with the parents/carers from your school who may want to grow



GROWING IN NEWHAM

Who is growing in Newham?

There is a network of community gardens across the borough. Many of these gardens run free gardening clubs for adults, with a focus on health and wellbeing. The community leaders who run these activities are always good people to talk to. If you share your vision and your plans for your school, they will certainly be able to support you in some way - whether through advice, helpful contacts, or just a friendly chat.

Here is the list of community gardens (see also map on page 10):

GARDEN	ADDRESS
1. Abbey Gardens	Bakers Row, Stratford, E15
2. Cody Dock Community Gardens	South Crescent, Canning Town, E16
3. Dorset Road Community Garden	Dorset Road, Green Street, E7
4. First Avenue Urban Wilderness	First Avenue, Plaistow E13
5. Forest Gate Community Garden	136 Earlham Grove, Forest Gate, E7
6. Gardening Thymes	Central Park Bowling Green, High Street South, East Ham, E6
7. Grow Together Be Together	Bonny Downs Community Association, Melbourne Road E6 2RU
8. Manor Park Village Community Garden	Station Road, Manor Park, E12
9. Parkside Gardening Project	St. Luke's Community Centre, Canning Town, E16 1HN
10. Play Sow and Grow	Gay Road, Stratford, E15
11. Sunflower Gardening Group	West Ham Cemetery, Cemetery Road, E7
12. William Paton Community Garden	Leslie Road, Custom House, E16

Capital Growth has a useful [map](#) of gardens in London. You can use this to find a garden near you, or you could put your school garden and your contact details on the map, so other gardeners can find you. You never know, you might find new community members keen to help out!

GROWING IN NEWHAM

Community gardens in Newham



GROWING IN NEWHAM

School planting and harvesting calendar

There are some great resources out there to help you plant gardens that will flourish during the school year.

The RHS School Gardening Campaign has lots of useful resources for schools. One of them is a [vegetable crop planner](#), which explains how long different vegetables take to grow. They explain what can be planted at the beginning of term for an end-of-term harvest, what needs to wait until next term, and what crops take 6 months or more.

The World Wildlife Fund (WWF) also has a lot of useful resources for schools. They have a [planting calendar](#) which shows when to sow, plant outdoors, and harvest different crops.

The organisation Food Growing Schools London also created a helpful planning sheet to help break down what activities to do in each term. With this [link](#), you can check out their suggestions for what to do in Autumn, Spring, and Summer terms.

Growing Newham's culture

Growing seeds from around the world is a great way to celebrate Newham's diversity.

Some Newham teachers we spoke to asked their students to bring in any seeds from places they had roots in and connections to so the class could plant them together. Some students of Lithuanian origin brought in pumpkin seeds. To the children's surprise, when it grew it was green instead of orange. This provided a nice lesson about different strains of the same plant.

GARDENING TIPS

The main ingredients for gardening are seeds, soil, compost, water, and sun. Combine these elements and you can have a beautiful, flourishing garden.

Where to grow

Often schools do not have a lot of space to choose from when deciding where to put a garden. You could probably make any space work, but there are a few things to keep in mind to make the journey easier:



SUN

South facing gardens get the most sun, which helps the plants in our climate. North-facing gardens get the least sun, and can be more challenging to grow in



ACCESS TO WATER

In the warmer months, the garden will need watering. Can you grow in a space with access to running water?



SOCIAL SPACE

If you want to use the garden to engage with the community, could it be visible from the pick-up area, so you can engage with parents?

Make sure to engage with your colleagues and anyone else who will support you in running the garden when choosing a space.

...if you have grass or soil to plant in

Growing on existing soil is often the easiest and cheapest way to get started. If there is an unloved patch of ground at your school, turning it into a food garden could be a great option. This is easier than it sounds. You don't need to dig up the grass to start a garden. You can do the 'no-dig' methods of converting grass to a food garden.

To do this:

- Cover the grassy area you want to convert with brown cardboard. If you have enough, put at least two layers of cardboard down. (Make sure to rip any labels or tape off before putting it down).
- Once the cardboard is on the ground, give it a good soaking with water
- Add a pile of compost on top of the cardboard. Ideally your compost layer is at least 4 inches thick.
- You can plant directly into the compost if it's deep enough.



A lawn being converted to a vegetable garden using the cardboard no-dig method

The cardboard stops grass and other unwanted plants from growing in this area, making space for what you plant. Within a few months, the grass under the cardboard will die and turn back into soil. The cardboard will also break down and become soil. In the meantime, earthworms love the glue that sticks cardboard together, so you should attract lots of worms!

GARDENING TIPS

Soil contamination: Assessing the risk

In cities, there are many sources of contamination which could make the soil dangerous to grow in because there could be a build-up of toxins in the soil. For trees or woody perennials, there is lower risk of plant contamination. However for fruit and vegetables grown for human consumption, caution is needed.

The types of contamination you need to assess are historic and present-day. Historic contamination could be from previous industrial activities meaning harmful waste products were spilled into the soil. Present-day contamination comes from cars and busy roads, as particulates from brake pads and tire wear are harmful. If your growing space is directly by a building site with no barriers or protection (like other buildings) this can also cause dust particulates to contaminate soil.

If your soil may be contaminated, you have two options:

1. Test your soil, then plant phytoremediators – species that remediate toxins, such as scented geranium or sunflowers – and test again the following year. Each soil test costs around £50 for one sample. Keep in mind this only resolves historic contamination, not present day contamination from busy roads.
2. Import fresh soil from a supplier and plant them in raised beds. Considering the cost of soil testing, this will likely be the easiest option if there is concern about soil contaminants.



A few containers filled with soil can transform a south-facing wall into a growing space

If in doubt, contact Patrick Vickers on the Newham Food Strategy team at SMARTFood@newham.gov.uk

...if you only have concrete space to plant in

Raised beds are a great option for converting a concrete space to a growing space. You could buy metal raised beds that will last for decades, or you could build some from wood relatively easily from easily accessible materials. For example, you can build raised beds from wooden pallets or scaffolding boards.

This [video](#) explains how to build raised beds from wooden pallets.

Once the beds are built, you will need to add compost every year to keep growing plants.

Money Saving Tip

Instead of filling the whole raised bed with soil, a cheaper way is to add a few layers of leaves, twigs, and other organic matter to the bottom of the raised bed. Then add soil on top. While your plants grow in the top layer of soil, the bottom layer will gradually break down and feed the soil. This will also help the raised bed retain moisture.

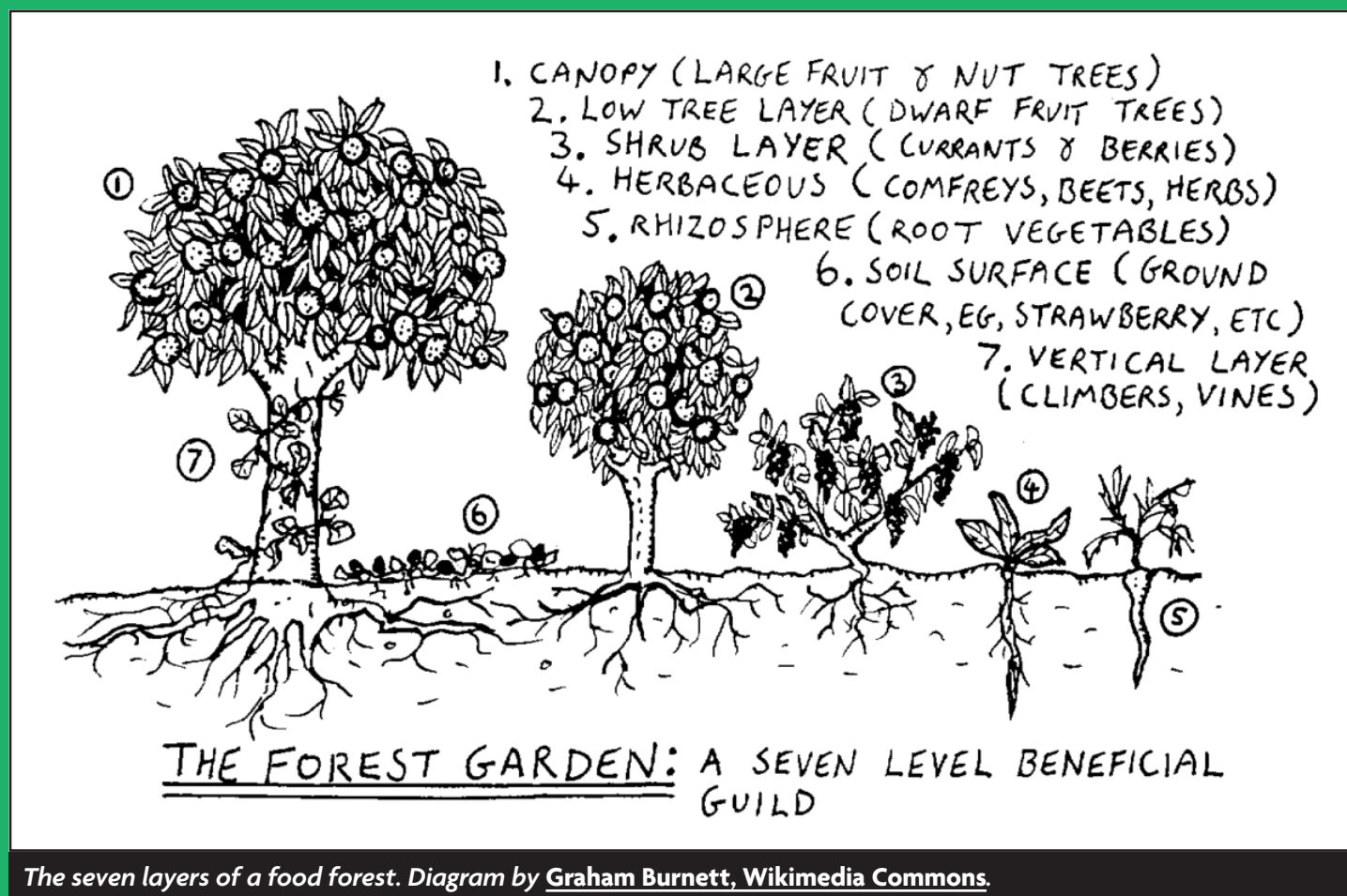


GARDENING TIPS

Could a food forest be right for you?

What is a food forest?

A food forest is a growing method where you select perennial, food producing plants (trees and bushes) and grow them alongside each other in a way that mimics a forest ecosystem. If planned well, you can fit lots of productive plants together in quite a small space.



GARDENING TIPS

Most of the schools we talk to have focussed on gardening with annuals - plants that die at the end of each season and need to be replanted each year. Lots of food we love to eat are annuals, but they are often higher maintenance and more time consuming to grow than perennials.

For the first couple of years, trees need care. Particularly watering if it's a hot, dry summer! But as time goes on, a food forest should need less and less maintenance each year, and produce more and more food each year. Once an apple tree is established, it grows an abundance of apples without too much work.

There are some key things to consider when planning for a food forest. Things like:

- The best specie to plant in your area
- What rootstock suits your soil
- How will you care for the trees in the early years
- How to avoid planting species that could cause allergies

Lots of schools are thinking about how to connect children with nature. Some are considering forest schools as an option. Planting food trees is the perfect way to combine food growing, connection to nature, biodiversity, climate action, and creating a peaceful and beautiful spot in the playground.

Is there a space in your playground or near your school that needs a bit of love? If you want to grow a food forest and need some support, we'd love to help. Please contact Patrick Vickers on the Food Strategy team at patrick.vickers@newham.gov.uk



Young apples on a tree in a Newham primary school

GARDENING TIPS

Compost

Why compost?

Composting is a way of creating fresh soil. Adding compost to your existing soil returns crucial nutrients and microbes to the soil. Without adding compost, the plants we grow deplete the soil by taking nutrients from it to grow. This is why wherever we grow food, we need to add compost regularly.

Composting isn't only good for the garden. If we send organic waste (like food scraps) to the incinerator, burning it creates harmful greenhouse gases. It's much healthier to turn food scraps into soil, if we can!

It's also much cheaper to create your own compost, rather than needing to buy new compost every year.

How make your own compost

The Newham Council [website](#) has lots of good advice on how and why to make your own compost:

GREEN COMPOSTABLE ITEMS INCLUDE:

- Fruit and vegetable scraps and peels
- Tea bags, coffee grounds and filter paper
- Crushed eggshells
- Grass cuttings limited quantity
- Young hedge clippings
- Annual weeds, for example chickweed and speedwell
- Old flowers and nettles
- Manure
- Pond algae.



PLEASE DON'T ADD THE FOLLOWING ITEMS TO YOUR COMPOST BIN:

- Cooked food waste
- Meat or fish
- Cat litter or dog waste
- Glossy magazines
- Roots of perennial weeds (that is those which return year after year)
- Diseased plants
- Plastic, glass or metal

BROWN COMPOSTABLE ITEMS INCLUDE:

- Gerbil, hamster and rabbit bedding
- Egg boxes
- Thin cardboard, paper, ridged cardboard packaging, toilet and kitchen rolls, and newspaper (torn up into small pieces)
- Dry leaves (small quantities)
- Garden cuttings
- Hay Straw
- Woody twigs and hedge cuttings
- Ashes from wood, paper and lumpwood charcoal
- Sawdust and wood chippings
- Wool, cotton thread and tumble dryer lint
- Vacuum bag contents
- Shredded paper.



GARDENING TIPS

“The main thing to remember is to balance your ‘greens’ - which have lots of nitrogen - with your ‘browns’ - which don’t have much nitrogen - to keep your compost healthy.

More Compost Support from Newham:

- Newham support residents with composting workshops. You can email recycling@newham.gov.uk to find out when the next one is.
- Newham subsidise the cost of compost bins. You can order online from [Get Composting](#) or call 0845 130 6090.



GARDENING TIPS

Water

The water challenge

In the summer months, making sure your plants have enough water is a key challenge of gardening at schools. Most successful gardens have someone to take care of the plants over summer. For this, it's down to you to find something that could work at your school.

Some schools in Newham have caretakers who continue to water plants in the summer. Others have partnered with local community members who care for the plants over the summer. Water harvesting (explained below) can help when there's a summer storm, but you will still need to water the plants during those long, hot summer months.

Water harvesting

Have you ever thought to reflect on how water is generally treated as a waste product? By pushing water down the drain as soon as possible, we put fresh water into the waste water system, mixing it with sewage!

Water harvesting is a great way to do something good for your garden, and good for the environment. Water harvesting works by attaching a water butt to a drainage pipe. Instead of the water running down the drain, it fills a water butt. The water is then available for you to use in your garden.



A water-harvesting system at Southern Road Primary School

ABUNDANCE

There's something magical about growing food. With a bit of know-how, you can discover how generous plants are. One tomato contains hundreds of seeds. Each seed can become a tomato plant, with hundreds of tomatoes. Each of those tomatoes has hundreds of seeds. You can see where this is going! Below are a few practices that can help you unlock this abundance:

Seed saving

You can save the seeds from your plants to regrow next year. Seed saving is cheaper, because you don't need to buy seeds every year. It also allows you to select plants that grow really well in your area. Some plants may have genetic traits that make them well suited for your area. You can save the seeds of the plants that grow the best, as they will have a better chance of flourishing.

Seed saving is really easy for dry seeded plants, like corn, beans, and kale. Wet seeded plants (when the seed is surrounded by fruit, like tomatoes, courgettes, and peppers) are more complicated to save, but still achievable.

For more support:

- Garden Organic have detailed instructions for seed saving many different plants www.gardenorganic.org.uk/seed-saving-guidelines
- Seed Savers also has a good guide www.seedsavers.org/how-to-save-seeds

Seed swaps

A seed swap is a gathering where gardeners meet to swap seeds. The seeds could be saved from a previous year, brought from another country, or someone may have plenty of one kind of seed, and fancy swapping. Seed swaps are a great event to organise to spread seeds, get tips from local gardeners, and meet the food growers in your community.

Taking cuttings

Did you know you can cut a small part off a plant, replant it, and end up with a second plant? This is called “taking a cutting”, and it's a great way to propagate new plants. If done correctly, the original plant is not damaged, and you can grow a healthy second plant for free. If you put the cutting in the correct conditions, the cutting regrows roots and becomes its own plant.

The exact method of cutting varies from plant to plant. For example, some plants require hardwood cuttings, and some require soft wood (new growth). Once you have identified a plant to take a cutting from, you can look up the exact method online. Here are some useful resources:

- [How and when to take plant cuttings](#)
- This video explains how to [propagate basil](#), which you could do on a sunny classroom window.

ABUNDANCE

Friendly helpers (biodiversity)

Learning that nature is full of all sorts of wonderful creatures we benefit from be careful with and protecting is a great first lesson in conservation! What are some steps you and your pupils can take to help wildlife in the garden? This [guide from the RHS](#) suggests:

- Choose some [plants for bugs](#)
- Look after trees at your school land around your school
- Leave a pile of dead wood to decay in a shady spot
- Add water, like a pond, for animals
- Leave some grass to grow longer
- Scatter wildflower seeds
-

Lets learn to notice and love all the forms of life that exist around us as a step to nurturing a generation that can grow to protect our wild Isles

LADYBIRDS

As well as being beautiful, they eat aphids - small green bugs that feed on the plants we like to grow. So ladybirds can help protect your plants.



EARTHWORMS

Earthworms are great for soil. They feed on organic matter, helping break things down and make the nutrients available for plants again. They also create space for water to seep into, helping keep soil moist in dry periods.



RED WIGGLERS

Smaller than an earthworm, red wigglers might be found in your compost. They're real helpers, because they can eat their weight in food scraps every day, converting to garden-ready compost! If the worms are happy, so is your soil!



BIRDS

As well as providing lovely relaxing bird song, bird droppings are very phosphorus-rich, providing essential nutrients for soil and plant health.



BEEES

Bees help plants grow by pollinating. That means they transfer pollen from one flowering plant to another, and are an important part of many plants' life cycle.



WE ARE GROWING

Feedback

Are you a local person with energy and ideas who believes in the power of food growing? We would love to hear from you!

There is always room to improve and we want this toolkit to be a busy and growing resource (just like our gardens!). Please share your ideas and feedback at SMARTFood@newham.gov.uk

A special thanks to...

The Net Zero Innovation Programme for funding and guiding this work.

Some amazing schools including Colegrave Primary School, Central Park Primary School, Keir Hardie Primary School, St Winefride's Catholic Primary School, Southern Road Primary, 360 School, 21 School, Salisbury Primary schools, Gallions Primary School, Drew Primary School, Portway Primary School who supported with research, school garden visits, and much more.

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