



WORKING
TOGETHER TO
INSPIRE AND
EMPOWER
PEOPLE

A photograph of four children in a school garden. In the foreground, a boy in a black t-shirt is crouching and pulling a beet from the soil. Behind him, a girl in a black t-shirt with a rainbow logo stands smiling. To the left, another boy in a green school sweater stands with his hands behind his back. To the right, a boy in a green school jacket holds a bunch of harvested beets. The background is filled with green foliage and trees.

GROWING FOOD AT SCHOOL

A BEGINNER'S GUIDE



Plants are fun to grow and tasty to eat!



Welcome to WWF's growing guide for schools. If you are considering growing food at school for the first time, then this guide is for you.

**GROWING
FOOD CAN LEAD
TO LIFELONG
CHANGES IN
ATTITUDES TO
EATING THE
FRESH STUFF
WE ALL NEED
TO BE HEALTHY**

This guide offers brief introduction with practical ideas on what fruit and veg to grow – and on where, when and how to grow them. We've designed our growing calendar so there is food to harvest as soon as possible – **and** so that all the best crops are ready before the summer holidays.

Growing food at school is a great activity for pupils of all ages: it builds teamwork and responsibility, and there are real connections with different parts of the curriculum. Above all, children enjoy the hands-on fun and the thrill of seeing a seed turn into something that is tasty to eat. Growing food can lead to lifelong changes in attitudes to eating the fresh stuff we all need to be healthy.

Growing food also connects children with the natural world – the world that we all depend on. In countries like ours, it is too easy for children to grow up with a very limited understanding of

where our food comes from. We want them to get their hands dirty and learn for themselves.

If you are feeling daunted, don't be! It's easy to get started. You can start small and grow the project from there. This guide highlights the choices and covers the main aspects of food growing you need to know about.

On the back page, we suggest some places where you can find more information. On any given growing topic, you can also try searching YouTube for a helpful video. Or you can ask for help in your local area – there are generous growers in every community. You won't need lots of money either: if you and your pupils are resourceful you will be able to find or recycle most of the things you need.

So grow for it! Soil and seeds, sunlight, water and a little care – it's a magical process!



READY, SET, GROW!

Things to think about before you start

Growing food at school for the first time could seem like a big ask for busy teachers.

MOST CLASSROOMS HAVE SPACE ON WINDOW SILLS FOR A PLANT POT OR TWO – OR PERHAPS EVEN A PLACE FOR A HANGING BASKET



But growing vegetables, fruit, herbs and flowers can be surprisingly straightforward and can be really rewarding for teachers and pupils. You can start small – with some simple indoor planters, for instance – and build up from there. And you don't need a lot of money to get started either. The main resources you will need are a bit of time and a group of eager young volunteers!

WHERE TO GROW: INDOORS VS OUTDOORS?

Not every school has suitable outdoor space for growing, but most classrooms have space on window sills for a plant pot or two – or perhaps even a place for a hanging basket. South facing windows are best, but not essential. Indoor growing is a great way to start. If you want to grow food and get your pupils into the outdoors,

an easy way to start is to use grow bags or other easily moveable containers. If you have a good place for a more permanent veg garden, raised beds work well.

WHAT TO GROW

The fruits and vegetables we recommend in this guide are ones that are robust and easy to grow – as well as being the ones children are most likely to want to eat! Among these are strawberries, tomatoes, salad leaves, cress, different kinds of beans, courgettes, squashes (like pumpkins), as well as carrots and potatoes. We have designed our school growing activity calendar (see page 5) to make sure activities happen in term time.



MAKE SURE YOU...

- Get your pupils involved from the start – including on deciding where and what to grow
- Involve your community – ask around for help, advice, seeds, tools and materials
- Find someone who can keep plants watered during half terms and school holidays
- Set up your outdoor garden with easy access to water and the classrooms





READY, SET, GROW!

Look after your soil and it will look after you! Here are some quick pointers on making sure you don't spoil your soil and thus your chances of growing a great crop.



SOIL AND COMPOST

It all starts with soil. Good soil is really important – vegetables are greedy and need highly-fertile soil to thrive in. You will need to nurture your soil if you want to grow vegetables year after year. If you have some topsoil to use you will need to add compost to add the nutrients that plants need. It is easy to make compost – you can simply pile up old plant material, or you can use a compost bin (ask your local council for one).

Don't forget to feed your soil: Once plants have been growing for 6 to 8 weeks the soil will benefit from the addition of some nutrients or extra compost. This will also mean the plants grow faster.

Soil facts: Soil is a living system, home to micro-organisms and to those all-important worms, and it acts as a filter keeping underground water clean. Soil is also important because around 10% of the world's carbon dioxide emissions are stored in soil.

TOP TIP

Tips for good compost



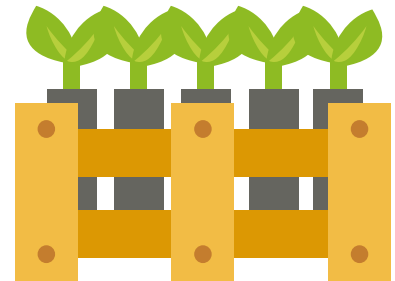
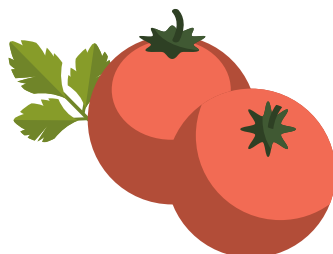
Use a mix of 'green' garden waste, such as leaves and grass, with 'brown' stuff like bark, roots and hedge trimmings. You can use kitchen waste, such as fruit and vegetable peelings, but don't use cooked food or meat waste such as bones (as these can attract vermin, such as rats). Pet litter from small pets, such as gerbils, rabbits and hamsters, can also be used. (But not dog or cat litter). Cover, stir or turn occasionally and leave.

INDOOR PLANTERS

Indoor growing can be a great way to get pupils interested in growing.

Don't spend money on indoor pots, make planters out of waterproof recycled materials – such as milk cartons, old boots, or small baskets lined with a plastic bag. Or if your local grocer has any unwanted wooden crates, these also make great planters when lined with old sacking. Your local garden centre will have plenty of spare pots they are giving away. Making your own is more fun and better for the environment. Choosing the right plants to grow indoors is important, as you don't want your indoor plants growing too big! Salad plants, herbs, and micro greens work well indoors. If you have space to hang a basket, some varieties of small tomatoes also grow well indoors. For an early crop plant them on a window sill above a radiator.

Ask pupils to work out which way the windows are facing – why is south-facing best?



OUTDOOR GROWING

Grow bags are a good way to start growing food outdoors. Grow bags can be easily bought in supermarkets and garden centres, but you don't need to buy them – you can make your own from strong plastic bags. You can grow plants in many kinds of containers from buckets to crates – ask around and see what you can find.

Old car tyres can make good small veg beds. (You will need to line them with waterproof plastic to keep the soil safely separate from the ingredients of the tyre). All these kinds of containers can easily be moved or removed and they can be put on concrete and other hard surfaces.

For a more permanent vegetable garden, raised beds work well. Again, they can be made fairly easily with recycled or upcycled materials – like wooden pallets. Ideally, you would have a soil depth at least 14 inches (or 35 cm). Raised beds don't have to be put on soil or lawn – but will need to be lined and watered more if set up on hard ground.

Get pupils to investigate suitable places for outdoor planters or raised beds. Ask them what things are important to know about each possible location.





WWF'S SCHOOLS GROWING CALENDAR

We have designed our school growing activity calendar to make sure key activities in term time. You can download the full version on School Zone schoolzone.wwf.org.uk/resources.
Password reminder: pandapaws



WWF'S SCHOOL GARDEN CALENDAR



LETTUCE & ROCKET

Salad leaves and rocket are – great for kids, as you can pick leaves as they grow. Sow salad outdoors in moist soil and thin to 10 cm apart, rocket 45 cm apart. Keep well watered. Can be grown in pots off the ground to avoid slugs. Get them in early and sow in weekly batches to avoid gluts.



CARROTS

Popular with kids, sow in early spring under a cover, leave 30 cms between rows, thin to 2 cms apart. You can cover to deter pests. Don't forget you can eat the bushy green tops. There are lots of interesting varieties – you can get rainbow carrots in lots of different colours! To store longer, cut off the green tops (and eat) once they are harvested.



COURGETTES

Another easy and prolific crop; it's satisfying to see these shapely veg develop and fun to harvest for young people. Sow seeds indoors after the last frost, space plants about 90 cms apart. Be aware they need a lot of space. Keep them well watered.



POTATOES

Choose the type of potato carefully to ensure harvesting before the summer holidays. Go for 'first earlies' or salad potatoes and you can be eating them by May. Find blight resistant varieties. Before planting chit the potatoes (stand with eyes upright and wait for strong green shoots to appear) in egg boxes in the classroom on a window sill. Then plant them 12 cms deep and 40 cms apart. Water well and cover stems with soil as they grow.



BEANS

We like all kinds of beans – French beans, runner beans and broad beans – and they are great because they fertilise the soil as they grow. Kids like them and you can eat runner beans raw. Sow indoors and plant out after last frost. You need to create a structure for them to grow up around, like a wigwam made of bamboo poles. Keep well watered.



BEETROOT

Another prolific and low maintenance crop. Sow outdoors and thin to 10 cms apart. Pick them when they are small, otherwise they can get tough. Don't forget you can eat the young leaves in salads. Beetroot chocolate cake is a favourite in WWF headquarters! You can get rainbow beetroot that comes in many colours.



SPINACH & CHARD

Like salad leaves, spinach is another great crop for harvesting as you go. Sow outdoors after the last frost, thinning to 15 cms apart. Sow every three weeks for continuous supply. You may need to cover spinach in cold weather. Chard comes in rainbow colours, the young leaves are great in a salad the older ones with a roast.



TOMATOES

Tomatoes are popular with kids and easy to grow. There are lots of interesting varieties, different sizes and colours – from red to yellow and even 'chocolate' kinds. Some varieties are perfect for growing in baskets indoors. For outdoor growing, sprout indoors then plant out at 45 cm intervals. You will need canes to support some single stemmed varieties.



PEAS & MANGETOUT

Another crop where you can eat the shoots as they come up. Sow these early indoors to get ahead. Plant out 5 cms apart with plenty of space between rows, support plants with sticks.



HERBS YOU CAN EAT

Herbs like rosemary, thyme, sage, oregano, and chives are simple to grow, and are a great companion to all the vegetables in this chart. These can all be planted at the same time in February inside and plant them out when the weather becomes warmer. < Check this text please



STRAWBERRIES

These can be planted at any time of the year. Make sure you ask around, as many local gardeners will have 'runners' they can give you. Strawberries can be planted in pots and grown indoors or outdoors. There are lots of varieties – you can get big and small ones, red and white ones too.



FOR THE BEES

Plants like lavender, which you can't eat, are very popular with bees. Take cuttings to start your own lavender bush in a pot – it smells wonderful and can be used to make home-made gifts. Sweet peas flower over an extended period and are another favourite with bees – and the kids can take posies of flowers home with them. Leave the flowers to die on the plants and they grow a pod which you can plant in spring / autumn.

Activity Sept Oct Nov Dec Jan Feb

Sow						
Plant						
Harvest						
Sow						
Plant						
Harvest						
Sow						
Plant						
Harvest						
Sow						
Plant						
Harvest						
Sow						
Plant						
Harvest						
Sow						
Plant						
Harvest						
Sow						
Plant						
Harvest						
Sow						
Plant						
Harvest						



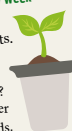
A FEW KEY TIPS

▶ **Watering regularly** is the key to successful growing. (But some plants don't like too much – read the instructions). If you are growing things in pots, like lettuce, remember pots will dry out quicker.

▶ **Don't let your plants go to seed** if you want to keep harvesting them – make sure you nip off the buds and newly formed flowering parts.



▶ **Sow in small batches every week** to ensure a continuous supply and to avoid gluts.



▶ **Started late?** In a hurry to get going? Buy young plants rather than starting with seeds.

THINK TWICE BEFORE GROWING

Raspberries
Beware, they can spread easily and take over your garden.



Mint
Fresh mint to have, but to take over growing in a pot.



READY, SET, GROW!

SEEDS, SPROUTING AND PLANTING



Most of the crops we recommend starting with can be grown from seed. Sprouting the seeds indoors – in shallow trays or small pots depending on seed size – means you can start much earlier. When they have grown into young plants, they can be planted outside in the garden or vegetable plot once the weather is warm enough. In heated indoor spaces you can start as early as January (e.g. radish, chicory and sweet peas). Otherwise, most crops and flowers are started off indoors in February or March, for planting out when the risk of frost has passed. Some crops – spring onions, carrots, beetroot and beans – are best planted directly outside.

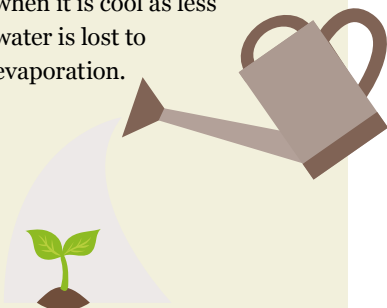
Get pupils to be in charge of regular watering – seedlings need moist soil to prosper.



TOP TIP

Water in the morning!

In cold weather, water plants in the morning after the frost has gone – this gives the plants time to 'drink' before a possible freeze. In warmer weather, water early when it is cool as less water is lost to evaporation.



TOP TIP

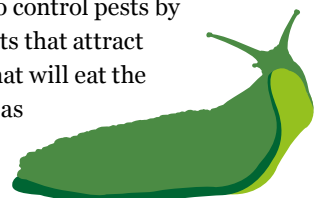
Read the instructions!

Seeds, seedlings and plants will come with instructions (and if they don't have them, look them up). Read them to give your food growing efforts the best chance of success. This will help you avoid putting plants that need shade in sunny places, or over-watering plants that don't like much water (like basil).



NATURAL IS BEST

If your precious fruit and veg are attacked by slugs and pests, please think before reaching for any of the many chemical products on sale. Slug pellets contain toxic compounds that are known to endanger garden wildlife, harm pets, and have been found in worrying concentrations in drinking water. Green or black fly can be removed by hand or controlled by spraying with water and a dash of washing up liquid. You can also control pests by having plants that attract creatures that will eat the pest – such as ladybirds.





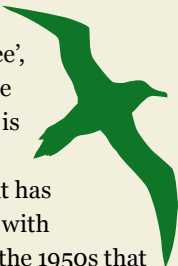
READY, SET, GROW!

OVER-WINTERING FOR AN EARLY HARVEST

One way to ensure an early harvest – safely in term time and not the summer holidays – is to ‘over-winter’ some of your crops. Vegetables planted outside at the end of October will stay dormant through winter and then quickly get growing once the weather warms up. Crops including onion, spring cabbages, garlic, kale, broad beans and rainbow chard can be over-wintered – and you can be harvesting from April onwards. Over-wintering is something pupils can get cracking on straight away.

FOR PEAT’S SAKE - NO PEAT

Unless clearly marked ‘peat-free’, most ready-made compost on sale is made up of 75% -100 % peat. Peat has been so popular with gardeners since the 1950s that many of the UK’s peat bogs have been drained and destroyed. Peatland, which is home to many birds, plants and insects, is now one of our most threatened habitats. Peat is also a fantastic store of carbon dioxide and water – and it takes hundreds of years to create it. With peat bogs in the UK disappearing, the peat in compost is often imported, but that doesn’t change the damage being done. So, if you are going to buy compost, make sure it is peat free. Otherwise, why not find out if somewhere near you sells horse manure: well-rotted, it makes great food for plants. Or you can make your own compost.



ESSENTIAL TOOLS

For indoor growing, all you really need is a small watering can. For outdoor growing, the essential tools are: big garden forks and spades, hand trowels and hand forks, a hoe for weeding, watering cans, lolly sticks or other markers so you can keep track of what you have planted; and a ball of string to mark straight furrows for planting. (Straight lines help you easily spot the weeds as they come up).



RECIPE IDEAS

As well as eating the food you grow fresh, you can get your pupils cooking too! Why not try some of these:



Beetroot chocolate cake



Courgette cake



Carrot cake



Savoury muffins



What about bees?

A quiet corner of a school garden can be home for a hive – you can ask in your community if there are any bee keepers who can help you. Bees are essential for pollination of many of our food crops but bee populations are under threat around the world. If a bee hive is too much to take on, you can plant sweet peas or a wild flower garden to keep local bees happy and healthy.





WWF'S LIVEWELL PRINCIPLES

The agricultural system that produces the wonderful variety of food available to us has a huge environmental footprint. Nearly a third of the energy we use is for agriculture and food production and nearly a third of all carbon emissions come from this.

WWF and international experts have worked together to identify six simple steps that will enable people to switch to healthy and environmentally sustainable food choices.



Eat more plants

- enjoy vegetables, fruits and whole grains



Eat a variety of foods

- have a colourful plate!



Waste less food

- one third of our food is lost or wasted



Moderate your meat consumption

- try other sources of protein such as peas, beans and nuts



Buy food that meets a credible certified standard

- consider MSC, free-range and fair trade



Eat fewer foods high in fat, salt and sugar

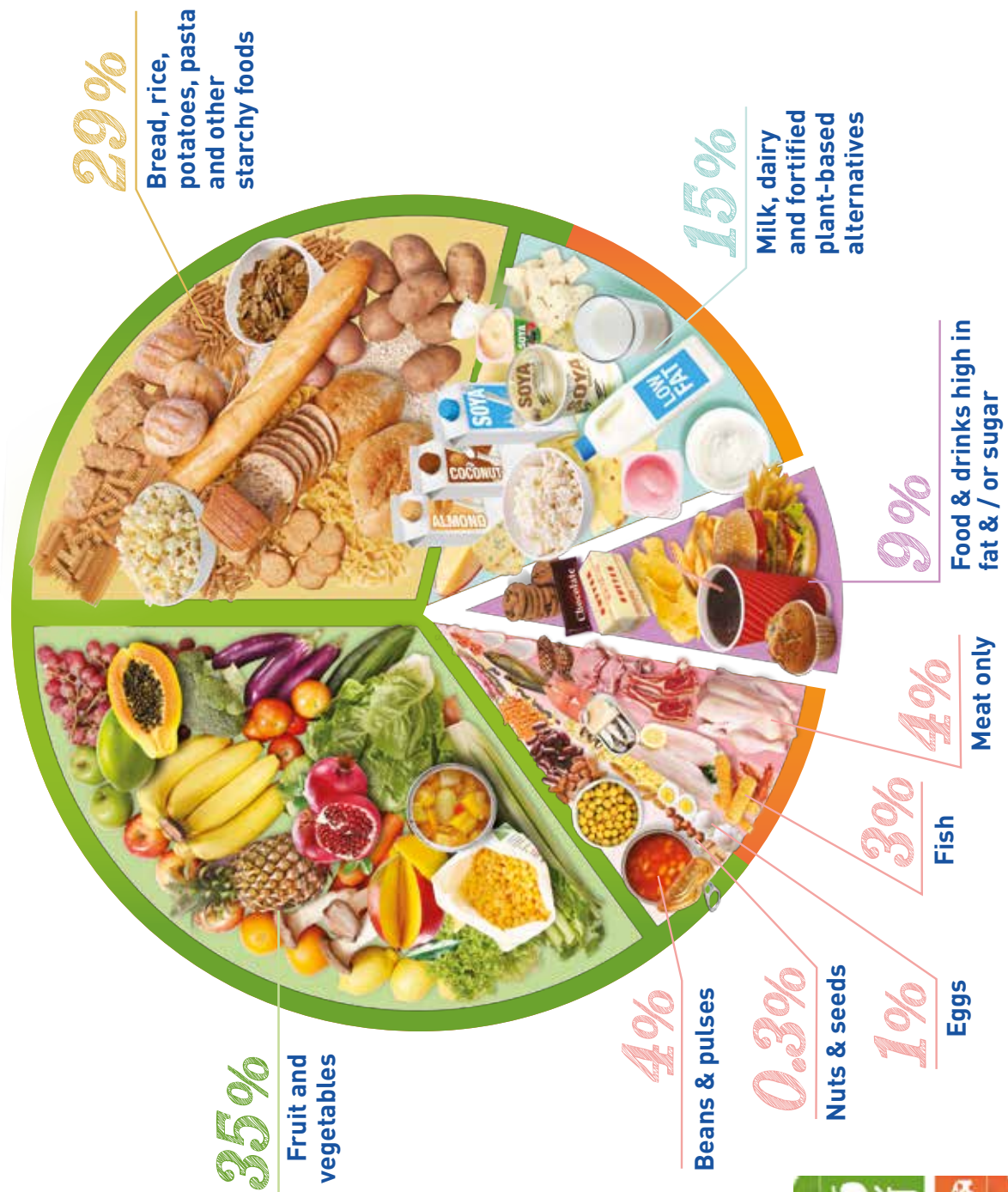
- keep sweet and salty foods for occasional treats.



More on the Livewell approach here: wwf.org.uk/livewell2020



THE LIVEWELL PLATE



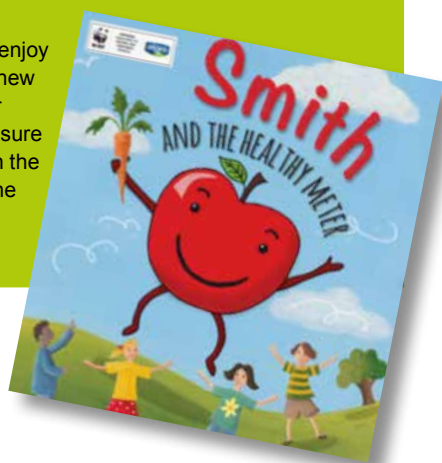
FIND OUT MORE ABOUT GROWING FOOD AT SCHOOL

Eat Seasonably tells you what's in season in the UK now, and has useful food growing and seasonable recipe ideas. More at: www.eatseasonably.co.uk

The Royal Horticultural Society has a huge range of great resources for schools. More at: www.schoolgardening.rhs.org.uk/home

The BBC has a good gardening information and videos. More at: www.bbc.co.uk/gardening/gardening_with_children/

Younger pupils will enjoy and learn from our new Green Ambassador storybooks – make sure you order the first in the series: Smith and the Healthy Meter.



Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

www.wwf.org.uk

WWF-UK, registered charity number 1081247 and registered in Scotland number SC039593.
A company limited by guarantee number 4016725 © 1986 panda symbol and ® "WWF" Registered
Trademark of WWF-World Wide Fund For Nature (formerly World Wildlife Fund), WWF-UK,
The Living Planet Centre, Rufford House, Brewery Road, Woking, Surrey GU21 4LL,
t: +44 (0)1483 426333, e: greenambassadors@wwf.org.uk, www.wwf.org.uk