



S3.1 Growing plants



The Bronze Award booklet explained how to get started and celebrate harvests with everyone who helped create your new garden.

This section continues these ideas by planning crops to pick fresh produce every term, especially vegetables. These exciting next steps build foundations for sustainable growing for years to come, but are still open to seeing what works and what doesn't. Other edible delights are also introduced with tips for growing fruit and herbs.

For every topic there is an Activity suitable for pupils and the community (numbers 34-37). See the DVD.

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S3.2 Planning crop rotation



Crop rotation is about growing related annual vegetable crops in different areas every year. This suppresses soil borne pests and diseases and avoids declining plant health and vigour by nutrient imbalance. This practice is very important for organic growers. This section explains the principles of rotation with a diagram. A34 explains how to start off your rotation.

Getting organised

Top tip

Fitting in to your school garden



Be flexible in how you lay out your crop rotation. Growing areas don't have to be all together, or restricted to a set number. Abbey Road Primary School has nearly 20 areas. You can be flexible as long as the principles of the next six steps are followed.



1 Make a list of all the vegetables you want to grow over a season

This list will change from year to year. You don't have to grow the same crops every year, though a few favourites usually emerge. The following examples reflect commonly grown UK crops, but the principles of rotation remain the same, whatever you are growing.



2 Group crops into their botanical 'families'. There is a list in the diagram on page 13 (also more extensive list in A7)

Crops in the same family are prone to similar soil-living pests and diseases, so moving them around helps to prevent the build up of problems. For example, the populations of 'potato eelworm' remain below a damaging level when the host family is only occasionally grown there.



3 Divide up your growing area into equal sized areas. It helps to draw a plan

- The number of areas depends on the length on your rotation. The longer the better so no family grows in an area too often. The minimum is four years, so plan at least four areas. Many schools have six areas; one for each year group. This discourages most problems, but some such as onion white rot and clubroot may persist for 20 years. Here, rotation will suppress disease rather than completely prevent or cure.
- Make areas roughly the same size so there is space for a range of families, ie don't fill the whole garden with just potatoes. This may limit the amount of any one particular vegetable, but a greater diversity of crops is far better for long term growing.



4 Put each family in a different area. Some families may need to share



If families are sharing, group those together that need similar soil treatment, guided by the following.

- Crops that need extra feed from compost or well-rotted manure before planting, especially potato, cucumber and cabbage families.
- Crops that don't need extra feed before planting, especially onion, carrot, beet and pea/bean family, although these do still enjoy good soil structure, so improve this with low nutrient leafmould.

This provides all families with the best possible growing conditions. It also means the whole growing area will receive the same overall treatment over the course of the rotation.



5 Decide the order of rotation, ie which family follows another. See next page for example

- Alternate plots needing extra feed. See point four above.
- Alternate crops that suppress weeds, eg follow large, light excluding leaves of potatoes with thin onions.
- Grow crops that don't belong to usual family crops where you can, but still in a different place each year. Such crops include okra, sweetcorn, sweet potato and several salads.
- Since pea/bean family fix their own 'nitrogen' and leave spare in the soil, follow these plants with crops that benefit from extra nitrogen, eg potato, cucumber and cabbage families. Equally, follow these hungrier crops with those with less nitrogen requirements, eg carrot and beet families.



- If 'liming' is necessary to increase pH (see A9), add to the cabbage family bed in the autumn before planting. This helps discourage clubroot disease. Keep away from potatoes though, where liming could encourage 'scab' disease.
- Long term perennial crops are not rotated, eg asparagus, globe artichoke, rhubarb and sea kale. This also applies to fruit and several herbs. Simply replant these in a different bed if they need to be replaced.

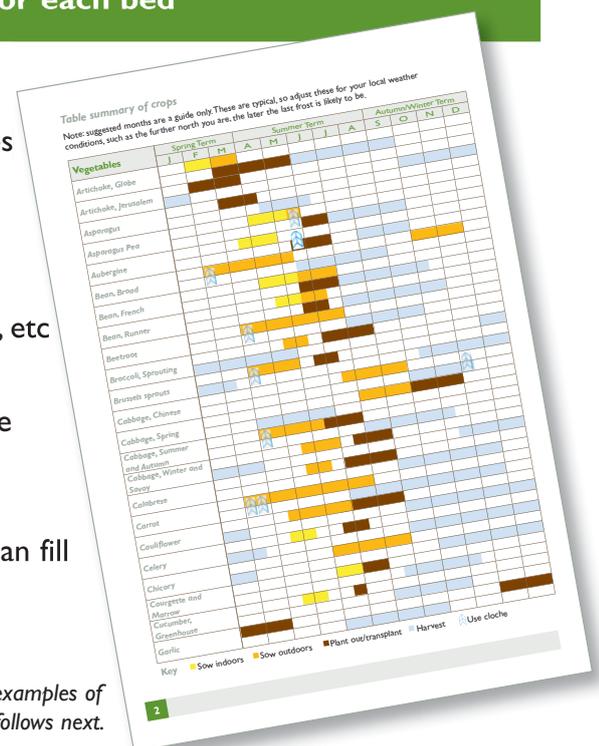


6 Make a month by month, or half termly, planting plan for each bed

This plan tells you when crops are using a space and which are coming next. This is well worth working out because some families cross over into another family's year. The following examples are taken from the diagram on the next page.

- 1 Some crops continue growing into a second year/season, eg Brussels sprouts sown in spring are not harvested until the following winter/spring, so the following families, eg carrot, beet, etc would be planted once the Brussels sprouts were removed.
- 2 Other crops can be started early before most of their family are grown the next year/season, eg sow broad beans in autumn after potatoes are harvested.

This also helps you make the best use of space (G4.8/G4.9). You can fill other gaps with green manures (G4.4).



See A35 for examples of what follows next.

Example four year crop rotation (typical crops you could grow)

Year one



Potato family (*Solanaceae*)
Aubergine, pepper/chilli, potato, tomato

Cucumber family (*Cucurbitaceae*)
Courgette, cucumber, marrow, melon, pumpkin, winter squash

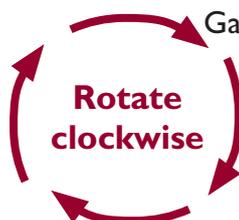


Carrot family (*Apiaceae*)
Carrot, chervil, coriander, dill, parsnip

Beet family (*Chenopodiaceae*)
Beetroot, leaf beet, spinach

Lettuce family (*Asteraceae*)
Chicory, Jerusalem artichoke, lettuce, salsify

Onion family (*Alliaceae*)
Garlic, leek, onion, shallot, salad onion



Pea/bean family (legumes, now *Papilionaceae*)
Asparagus pea, broad bean, fenugreek, French bean, pea, runner bean.
Can also grow some lettuce here

Cabbage family (*Brassicaceae*)
Brussels sprout, cabbage, calabrese, cauliflower, kale, kohlrabi, land cress, pak choi, radish, rocket, sprouting broccoli, swede, turnip



Year two		Year three		Year four	
Bed one Pea/bean	Bed two Potato, cucumber	Bed one Cabbage	Bed two Pea/bean	Bed one Carrot, beet, lettuce, onion	Bed two Cabbage
Bed four Cabbage	Bed three Carrot, beet, lettuce, onion	Bed four Carrot, beet, lettuce, onion	Bed three Potato, cucumber	Bed four Potato, cucumber	Bed three Pea/bean

Health & Safety	Be careful when handling soil and compost, washing hands afterwards. <i>See also Health and Safety Guidelines (Section SG1.2)</i>
Activities on DVD	A7 Crop and family games A34 Developing a crop rotation plan A35 Creating a term time harvest plan
Further information	S3.3 Harvesting each term Food Growing Instruction Cards under 'Family group to grow with' box



S3.3 Harvesting each term



An important part of the Food for Life Partnership Mark Awards is harvesting fresh food every term. This is easy with a bit of planning and using different varieties, techniques, and a reasonable range of crops. This section reveals the secrets of always having something to harvest, including in winter. A35 offers the chance to plan your own growing timetable.

Guiding principle

Year round harvesting relies on forward planning. You need to know when crops should be planted and harvested, and then divide this plan into weekly job lists. See A35 for a table of planting and harvesting months for major crops to get you started. This table can be added to with the following resources.

- Food Growing Instruction Cards.
- School Term Time Garden Planner (part of the 'Food for Life Partnership Mark: an introduction pack').
- Seed catalogues, eg Organic Gardening Catalogue (www.organiccatalogue.com).

Also add your experience and experimentation – plus contingency for the great, but variable, British weather. Use varieties with overlapping harvest dates (see below) and storage and protected cropping (see next pages).

Using varieties for term time harvest

Grow varieties that are ready to harvest at different times of the year, especially vegetables. This lets you stagger harvest times by weeks or months. There are lots of examples.

- Early carrots from a March sowing produce quick maturing roots to eat fresh in spring/early summer. Slower 'maincrop' varieties are ready later in the year and can be stored.
- Early potatoes are ready for harvesting from June-July; maincrops from September and can be stored.
- Cabbage can be cut year round with as few as three varieties, while you can follow summer/autumn cauliflowers with winter varieties.
- Plant autumn onions in October for a June harvest. This is earlier than spring-sown onions that mature from mid July.

Plot to plate

- Tailor plans for what you'll need in the kitchen.
- Ask school caterers what crops would be handy and when, perhaps for special occasions such as Christmas dinner.
- Work back from recipes. See A51 and guidance from Focus on Food Campaign (www.focusonfood.org).



Essential tip



Working backwards

The hard part of using varieties is learning dates.

- Sow winter cauliflowers in spring.
- Sow winter salads in late summer.
- Sow leeks ready for spring 10-12 months before.

This is why planning when to sow/plant, and then remembering to do it, is so important.

Using techniques for term time harvest

Use modules

Get an earlier crop by sowing plants in pots/trays for transplanting into soil when older. See A22 for technique. This makes good use of space by letting another productive crop use an area of soil until needed by the transplants. This is rather than sowing the next crop direct and 'wasting' soil while seedlings grow.

Growing in modules alters the harvest time most for cold-sensitive crops such as pumpkin and tomato. You can sow these in early May on a windowsill, cold frame, or greenhouse/polytunnel. Then transplant them after the last frost at the end of May, or June for schools further north. This gives plants a month's head start and earlier harvest than crops sown directly into the soil after the last frost.

Starting plants in modules also helps with succession sowing (below).

Use protected cropping

Protect plants from harsh weather, especially cold and wind. Cover outdoor rows of seeds and plants with movable 'cloches' or horticultural fleece. These create a warm microclimate that encourages plants to grow quicker and get a head start rather than waiting for warmer weather. Try this method for earlier broad beans, beetroot, carrot, pea, summer cabbage, radish, strawberry, etc.

Also use protected cropping in autumn to prolong harvest, eg lettuce, Chinese cabbage, pea, strawberry, etc. See details in G4.9.

Greenhouses/polytunnels offer more permanent protection. Use the warm, sheltered environment for crops all year round. See S4.9.

Sow in succession

Sow only small amounts of seeds of crops that deteriorate once ready to harvest, such as hearting lettuce. Then sow again a few weeks later, usually after the first batch of seedlings appear. Each batch of plants matures later than the next. This avoids lots of plants becoming ready at the same time so you have time to eat everything before it is too old, but still have a regular supply. The timing doesn't always work, but is usually fairly close despite plants sometimes catching up if the weather is good.

Use 'succession sowing' for spinach, chard, calabrese, carrot, summer/autumn/winter cabbage, kohlrabi, pea, radish, rocket, salad onion, turnip, various salads, etc.

Store produce

You can store several crops for use out of season. A32 has instructions for storing major fruit and vegetables and S3.5 looks at drying/freezing herbs. There are also exciting opportunities for freezing soft fruits such as blueberries and blackberries to use in school desserts in winter.

Also try making jam, chutney or other preserves at home and at school. You could sell jars to raise money for the garden. Ensure adult supervision. See resources at www.focusonfood.org.



Difficult times

Season	Crops to harvest (fresh)	Sowing time
Winter November to February	● Cauliflower, broccoli, Brussels sprouts, leek, celery (trenched varieties), kale, winter cabbage, leaf beet, parsnip, salsify, scorzonera, swede, etc	Spring before
	● Salads and spinach	Autumn before
	● Forced chicory; see Food Growing Instruction Cards	Spring before
	● Mushroom, seed sprouts, and herbs such as rosemary	Year round
Early spring 'hungry gap' March to May	● Quick maturing radish, rocket and other salads	Spring using protected cropping
	● Leeks, kale, sprouting broccoli	Spring before
	● Spring cabbage	Summer before
	● Long term crops, eg asparagus, sorrel, rhubarb, seakale. Try 'forcing' the latter two for earlier crop; see Food Growing Instruction Cards	Best planted in spring
	● Mushroom, seed sprouts, and herbs such as rosemary	Year round

Keep a diary

Keep a note of your gardening jobs during the year, jotting down when you actually sow and harvest crops, not just intended dates. These records are really useful for planning next year. Record your successes, failures and techniques.



A terrific public display of gardening jobs at Abbey Road Primary School. This 'to do' list is for pupils, parents and the wider community, keeping everyone informed and in touch with seasonality.

Ways of keeping supply even

Keep plants producing

Harvest regularly from crops such as beans, peas, edible flowers, and courgettes. If they are not picked frequently, plants will often stop producing.

Select long lasting varieties

Varieties that remain harvestable for a long time are useful, eg cabbage 'Minicole FI' will last months in the ground without deteriorating, while others split or start flowering. Try also loose-leaf lettuce and baby salads. These are 'cut-and-come-again' so can be picked regularly from young until they eventually flower. See salads entries in Food Growing Instruction Cards.



Don't wait for crops to become as large as possible. Instead harvest young plants for a regular supply of 'thinnings', where alternate plants are left to grow larger. Try for carrot, beetroot, kohlrabi, salad. Small onions, potatoes and broad beans are also very tasty.

Extend your herb season

- Grow on a windowsill for winter picking, eg mint, sage.
- Cover plants with horticultural fleece to extend autumn picking, eg coriander, fenugreek, parsley, marjoram.
- Sow quick maturing herbs regularly for a succession of picking, eg dill, chervil, coriander, parsley. Sow a few of these late summer/autumn. They'll crop throughout winter if protected by a cold frame or greenhouse/polytunnel.
- Pick year round from 'evergreen' herbs that don't lose their leaves, eg bay, rosemary, thyme, winter savory, etc. Only pick these lightly in winter as there is no new growth.
- Herbs grown for their roots can be harvested in winter, eg horseradish.
- Use herbs from storage, eg drying and freezing. See S3.5.

Health & Safety	Only eat plants you're sure are safe. Always check with adults before trying. <i>See also Health and Safety Guidelines (Section SG1.2)</i>
Activities on DVD	A22 Transplanting young plants A32 Storing produce A35 Creating a term time harvest plan
Further information	B5.12 Harvesting and storing S3.5 Growing herbs S4.9 Using greenhouses/polytunnels G4.8 Making full use of space G4.9 Using protected cropping Food Growing Instruction Cards 'School Term Time Garden Planner', part of the 'Food for Life Partnership Mark: an introduction pack' Organic Gardening Catalogue www.organiccatalogue.com



S3.4 Planting fruit



Growing fruit is immensely satisfying. You can look forward to picking apples straight from the tree or enjoying a juicy raspberry. These seasonal delights make the extra planning needed to grow fruit worth the effort, especially when lots of people are involved. This section outlines what you need to know to get started. A36 tells you how to plant a tree and A61 describes pruning and training.

Three important points

Diversity	There's a great range of fruit you can grow. This section concentrates on traditionally recognised fruit such as pears and strawberries, although technically tomatoes and beans are also fruit.
Long term	Most fruit are longer term crops, taking a few years to produce large amounts to harvest. Trees take the longest, while you can get a quicker harvest from bush fruit, as well as cane, vine and non-woody fruit (see below).
Choosing varieties	Select for flavour, fruit size, uniformity, timing of harvest and pest and disease resistance. If there is space, grow a range of varieties that are ready to harvest at different times of year as well as varieties from the local area.

Types of fruit by growing habit

Bush, cane, vine and non-woody fruit

- Bush fruit include blackcurrant, blueberry, gooseberry, redcurrant and whitecurrant. These produce fruit on young woody stems. Some are also grown against fences.
- Cane fruit include blackberry, hybrid berries (eg loganberry), and raspberry. These produce fruit on long, usually woody stems that grow from ground level.
- Vine fruit include grapes and kiwi fruit. These produce fruit on long new shoots coming from a permanent branch framework.
- Non-woody fruit include strawberries, melons, pumpkins, etc. The latter two will fruit and die in one year and are usually grown as part of annual vegetable crop rotation. See S3.2. Strawberries will fruit well for at least three years before declining, so have a longer rotation cycle.



Redcurrant bush in small space.



Raspberry cane with flowers.



Two year old strawberry plants.

Tree fruit

- 1 These include apple, pear, plum, cherry. These fruit on young woody shoots from a permanent branch framework.
- 2 These can be 'pruned' and 'trained' to fit available space, eg bush, cordon, espalier. See G4.10 and A61.
- 3 Choose varieties that will reliably 'pollinate', ie some have 'self-fertile' flowers so will produce fruit with just one tree in the garden. Other varieties must be 'cross-pollinated' so you need to grow two or more varieties that flower at the same time of year. The latter are arranged into widely recognised 'pollination groups' that describe expected flowering times, eg apple 'Katy' will pollinate 'Kidd's Orange Red' apple.
- 4 Choose 'rootstocks' to control tree vigour and final height. A rootstock is a set of roots from another 'viral-tested' tree attached ('grafted') to the variety, eg 'Katy' could be grafted onto the rootstock 'M9' to produce a tree up to 2.5m tall. See table below for more examples. The principles of grafting link well with science curriculum topics. The skill of grafting is also possible for older pupils to learn.



The 'graft union' of tree fruit where the selected variety is joined to a 'rootstock' to control tree vigour and size.

Important:

Specialist fruit suppliers, and good garden centres, will be able to advise you on tree selection, including local varieties, rootstocks, pollination groups and tree spacing. See also the Food for Life Partnership fruit resource available free from www.gardenorganic.org.uk/schools



Fruit type	Pollination requirements	Main rootstocks (approx. tree height)
Apple	Use pollination groups	M27 (1.5m), M9 (2.5m), M26 (3.5m), MM106 (4.5m)
Apricot	Self-fertile	Torinel (3m), St Julien A (4m), or seedling peach or apricot
Cherry	Most acid cherries are self-fertile; sweet cherries vary, self-fertile easier	Gisela 5 (3.5m), Colt (4m)
Peach, nectarine	Most varieties are self-fertile	St Julien A (4m) (most common), Brompton (4.5m), seedling peach
Pear	Use pollination groups	Quince C (3m), Quince A (4m)
Plum, gage, damson	Some varieties self-fertile; best to use pollination groups	Pixy (2m), St Julien A (4m)
Quince	Self fertile	Usually Quince A (4m)

- Notes:
- Self-fertile varieties usually crop better when more than one tree is grown of that variety, eg plum variety 'Victoria' will crop fine with one tree, but better with two.
 - The most dwarfing rootstocks do badly unless in fertile soil and permanently staked, eg M27.

Where to grow fruit

Since most fruit is a long term crop, choose a space that will be available for a few years. There are several possibilities.

- 1 Fruit beds and borders, much like vegetables, eg four gooseberry bushes in a 3x2m space, or pear trees 'trained' against a wall or fence, etc.
- 2 Containers, ideally fairly large, eg strawberries, small apple trees on M27/9 rootstock, blueberries with special acidic compost, smaller blackcurrants, etc. See B4.6 for details of container growing.
- 3 Orchards for a collection of woody fruit, usually trees, eg apples, pears, plums. Seek advice about spacing from your local garden centre or fruit nursery. Position trees for easy access and to create teaching space, adding groups of flowering plants to attract natural predators for pest control.
- 4 Greenhouses and polytunnels, for fruit that benefit from extra warmth, eg grapes (usually with roots outside), melon, strawberries, nectarines and peaches.
- 5 Spare space around school grounds, eg by bus stops, outside entrances, car parks, in front of an eyesore, etc. Fruit should be accessible so pupils and community see how it grows and feel welcome to taste.
- 6 Some fruit such as melon only grow for one season, so can be slotted in with crop rotation, ideally where protected cropping is available, eg cloche or greenhouse/polytunnel.



'Train' fruit into space saving shapes. See G4.10 and A61.

Top tip



Location, location, location

Most fruit like a sunny area, although summer raspberries and blackcurrants don't mind some shade.

Choose a sheltered area away from the worst of the winds. Also avoid areas where colder air will gather at the bottom of slopes, ie a 'frost pocket'.

Getting people involved

Case Study

Apple themed events at Sowerby Community Primary School

Fruit growing started with a school competition announced in assembly to design an orchard. Pupils proudly displayed their designs. The winning design was chosen by an apple expert, Clifford Cain, and later planted by pupils, parents and other local people. Apple themed events followed linking to all parts of the National Curriculum, including apple identification, apple bobbing, and apple sustainability (eg food miles, packaging, etc).



Designs for school orchard.



Apple related talks for all.



Apple themed lunch and snacks.



Parents at Lydgate Infant School planting fruit bushes.



New tree at Bartley Green School with help from a local volunteer.



Getting ready to plant at Bolsover School. See A36 for technique.

Ideas for engaging people

Familiarity with and fondness for fruit offers special opportunities to engage people in school growing and food culture. The following are just some ideas already used in Food for Life Partnership schools.

- Decide which fruit to grow and design a growing space as a school community; this way everyone feels involved from early on.
- Develop your growing space as an outdoor classroom, eg read fruit related poems as part of literacy. An amphitheatre layout also suits garden community events. These multiple site uses help justify the cost and set-up effort.
- Plant fruit where people gather, such as grassy areas during lunch. Schedule events to coincide, such as harvesting, and invite onlookers to join in.
- Invite pupils in the final year of primary school to plant a tree in their new secondary school. This idea immediately connects pupils with food growing in their new school and helps sustain their interest. Having something familiar also eases 'transition' for pupils as they settle into their new school and, of course, have time to see their tree fruit as it grows. Schools involved can also share the cost of planting trees.
- Involve people in raising money for buying fruit plants, eg sell produce from the school garden, involve school caterers in preparing snacks made from fruit harvested by the school community. Appeals are also useful and local businesses are often willing to sponsor plants. Grants may be available to plant regional and historic varieties. See funding (SG2.6) and business sections (G2.4) for more tips.
- Develop partnerships with local allotment groups to grow fruit together, sharing the upkeep and harvest. Similarly, contact enthusiasts at local interest groups who are often very willing to help.

Health & Safety	Position and plant fruit safety, ensuring appropriate adult supervision. Be careful of wasps that can be dangerous around fruiting times. <i>See also Health and Safety Guidelines (Section SG1.2)</i>
Activities on DVD	A36 Planting a tree A61 Pruning and training fruit
Further information	G4.10 Pruning and training fruit SG2.6 Raising funds G2.4 Developing business enterprise Learning through Landscapes 'Fruit-full schools' www.ltl.org.uk/fruitfull_schools.htm 'Vegetable and Fruit Gardening', Royal Horticultural Society. ISBN 1405331267



S3.5 Growing herbs



Herbs add flavour to all sorts of dishes. Many people will recognise the refreshing taste of mint or pungent basil leaves. Herbs are easy to grow around the school garden with minimal care. Herbs also include plants with aromatic and medicinal qualities, but this section focuses on growing culinary herbs to use fresh or out of season from storage. A37 demonstrates a 'herb spiral' at a Lancaster school.

Planting choices

- The selection of culinary herbs is huge, so start by choosing the most useful for you, school caterers and cooking club members.
- Growing conditions are also varied, so grow the herbs that like your garden's soil and aspect. See summary table below for examples.
- Choose growth habits that suit the available space. Habits are varied, but most fall into three groups.
 - Small bushes, eg bay, basil, rosemary.
 - Clump forming, eg chives, dill, parsley.
 - Spreading, eg mint, marjoram, sorrel.
- Ask parents and local plant nurseries for tips. See also Food Growing Instruction Cards.



Pupils at St Peters School planting bay herb in well prepared soil.

Tailoring growing conditions

<i>Moist soil</i>	Examples: chervil, chives, angelica, mint. Increase soil moisture retention in drier soil by digging in compost or mulching. See A9 for techniques.
<i>Well drained soil</i>	Examples: marjoram, rosemary, sage, tarragon, thyme, savory. Make soil freer draining by adding compost and grit if needed. Use containers with a free draining potting mix (see A38 about potting mixes) or use taller raised beds that will have freer draining soil. <i>Note: Plants with grey/thicker leaves tend to like these conditions, and usually full sun and lower fertility soil as well. Most are from Mediterranean regions.</i>
<i>Fertile soil</i>	Examples: basil, chervil, dill, fennel, parsley. Add compost before planting to boost fertility. See A9 for technique.
<i>Less fertile soil</i>	Examples: bay, fenugreek, rosemary, sage, thyme. Add lower nutrient soil improver such as leafmould; otherwise plants produce leggy shoots, usually with less flavour/aroma.
<i>Sunny</i>	Examples: basil, dill, marjoram, rosemary, savory.
<i>Part shade</i>	Examples: angelica, chervil, horseradish, lovage, parsley, mint, sorrel.

Growing tips

Herbs are usually trouble free when growing in their preferred conditions. Keep your usual vigilance to spot pest and disease early. Inspect any plants brought in for problems and position each plant with enough space for good airflow to help prevent diseases. Remove seed heads of herbs that easily 'self seed' around your garden, eg lemon balm and chives.

Use crop rotation to reduce soil problems (see S3.2)

- **Perennial** (long term) herbs that live for a few years – replant in a different bed when replaced.

Examples: mint, sage, sorrel, bay, marjoram, etc.

- **Annual** (short lived) herbs that live only one season are rotated with annual vegetables.

Examples: chervil, coriander, dill. These all belong to the carrot family (*Apiaceae*) and also suit the vegetable patch as they are sown regularly for a 'succession' of pickings.

Cutting back

Small bushes

Regularly pick shoots to encourage a bushy habit. This produces higher yielding, compact plants rather than straggly specimens. Cut back flowering shoots after flowering to avoid plants becoming too woody, eg thyme.

Clump forming

Remove 'annual' herbs that live one season, such as coriander and dill, but leave 'biennial' herbs growing for two seasons until flowering/seed set, such as parsley. Tidy growth of longer living perennials, eg leaves of chives die down.

Spreading

Remove dying shoots and cut back to prompt new growth. Restrict spread by planting in containers or in large bottomless pots in the soil with 4cm lip to contain roots. This is especially important for mint.



Increase stock of herbs for filling your garden and selling/swapping plants. Use seed (A18), division (A44) and cuttings (A58). Use cuttings indoors in late summer for herbs that may not survive cold winters, eg sage (pictured) and tarragon.



Herb spiral at Lancaster Girls' Grammar School. See A37 for construction.



Herbs growing in containers at Abbey Road Primary School. See A11 for how to pot up containers.



Herbs planted around vegetables at Eastwood Comprehensive School.

Picking herbs

Nothing quite beats the flavour and aroma of picking your own organically grown herbs – especially when immediately handed to chefs making lunch or helping at a garden event. This is a real pleasure, added to by the following techniques.

- Pick leaves when dry by midmorning, before hot midday sun evaporates the oils.
- Harvest gently as bruised leaves release oils.
- Remove no more than one third of the total growth.
- Cut a short time before use to avoid deterioration in flavour/texture.
- Pick from strong growing plants.
- Leaves usually taste better shortly before plants flower. Afterwards they redirect their energy, so remove flowers unless growing for flower/seed.
- Let plants become established before harvesting, eg pick sage from second year.



The enticing aroma of fresh herbs picked by teachers at a Food for Life Partnership training day.

Top tip



Extend your harvest season

See section S3.3.

Storing herbs

Drying preserves most flavours for up to one year

Examples: bay, dill seed, marjoram, mint, sage, thyme.

- Dry away from direct sunlight to lessen flavour loss. Choose clean, dry, well ventilated location, free from dust and insects. Dry each herb separately as they dry at different rates.
- Dry by hanging stems upside down in bunches tied together with tightly wrapped string. Alternatively, strip off leaves and lay them flat in single layers on trays, turning often for even drying. Remove any mouldy growth. You can use a microwave on minimum heat for two to three minutes, turning every 30 seconds.
- Herbs are ready when crisp, but not brittle; they should crumble not shatter. Store in airtight containers to prevent moisture absorption. Choose a dark, cool, dry place.

Freezing retains flavour, but not texture

Examples: basil, chervil, chives, fennel leaf, parsley, marjoram, mint, sorrel.

- Freeze in sealed plastic bags or chop up and freeze in ice-cube trays topped up with water.

Health & Safety

Only use plants that you're sure are correctly identified as herbs. Ensure the effects of using selected herbs are known and assessed safe for the intended consumer/use and in proposed concentrations/quantities. Ensure adult supervision. Consult local expert/medical herbalist as necessary.

See also *Health and Safety Guidelines (Section SG1.2)*

Activities on DVD

A9 Testing soil and improving fertility
A37 Making a herb spiral

Further information

'New Book of Herbs', by Jekka McVicar. ISBN 1405305797
'Encyclopedia of Herbs' by Deni Bown, Royal Horticultural Society. ISBN 1405332387.