

SGI.I Gardening safely



Children have enquiring minds and are always exploring and investigating everything around them. Risk potential in relation to hazards change with the age and experience of the child and from child to child.

Whether child or adult, it's impossible to avoid all potential hazards, so it's important to learn as much as you can about your garden environment and take a common sense approach. This section gives you advice on possible hazards and risks in the school garden and how to overcome or reduce them. There is also guidance for specific gardening activities throughout the manual and activities.

For SGI.2 there is an Activity suitable for pupils and the community (A4 and 5). See the DVD.

SG1.2	Health and Safety Guidelines	A4 and 5,T3 and 4	Page 91
SG1.3	Manual Handling and back care		Page 94



SGI.2 Health and Safety Guidelines



When working outside or inside with plants and soil, a commonsense approach needs to be taken with respect to health and safety. Always carry out a risk assessment before gardening activities take place (A5).

The following are guidelines only and Garden Organic does not take any responsibility for incidents that may occur.

General

Hand washing	Thorough hand washing is extremely important. Teach young people to wash their hands correctly and thoroughly. They will need reminding of this regularly. This is a basic method of reducing risk related to many of the items detailed including protection against tetanus
	and when composting. Cover cuts or grazes with waterproof sticking plasters before gardening or making compost.
Gloves	Schools should adopt their own approach as to whether or not pupils should wear gloves when carrying out certain activities such as handling soil and compost. This is not essential if good hygiene routines are taught. However, gloves should be available for use if necessary. Gloves may be required for people that have skin allergies such as eczema.
Tetanus bacteria	Don't let pupils eat soil; it can carry tetanus bacteria as well as other pathogens. Check that tetanus vaccinations are up to date and try to stop pupils sucking thumbs or fingers, or biting nails while in the garden. Wash fresh cuts well with cold running water or clean with an antiseptic wipe.
Footwear	Ensure that the pupils wear the correct footwear, eg sturdy boots/shoes or Wellingtons. As part of your school's risk assessment a decision will need to be made regarding circumstances when it may be advisable to wear steel toe-capped boots.
Work area	Help avoid accidents by making sure the working area is kept tidy.

Weather condition

In sunny or hot weather make sure that people wear hats and sunscreen to avoid sunstroke and burning. It is also important to have an adequate supply of fresh drinking water to avoid dehydration. If possible work in a more shady area of the garden.

It is still possible to garden in cold, wet weather when wearing appropriate warm, waterproof clothes, with possibly an extra pair of socks and Wellington boots. If the weather is too rough, there are indoor activities that can be done instead, eg cleaning pots or making labels.



Using tools safely.

Knowing what to compost.

Wash hands regularly.

Land contamination

There are very few areas in the UK where this is a concern. If you suspect a problem, contact your Local Authority who are responsible for this. If land is contaminated, this does not prevent a school from having a garden as Garden Organic support schools to grow using containers as an alternative.

Using food grown in the school garden for school dinners

We recommend hand washing facilities are available. Separate facilities with running water are required for cleaning produce. There is no need to wash garden produce in any type of sterilisation fluid.

Composting food waste

Do not compost meat, dairy or cooked food as this can attract vermin. There is little evidence of risk to human health by exposure to bioaerosols (see B7.2 for definition) from domestic composting. However, if someone is susceptible (eg suffers from asthma), make sure they are not close by when turning or disturbing a compost heap.

Vermin

Good housekeeping should help to prevent this problem. Keep growing and composting areas tidy and don't leave rubbish lying about. If you suspect that rats are present contact your Local Authority Environment office. Ensure that compost bins are maintained correctly. Rats, dogs and foxes may visit a compost heap if they are already in the area but composting does not generally attract vermin in the first place. If rats or mice are nesting in your compost heap, this may be a sign that the heap is too dry. Add water until it has the consistency of a wrung-out sponge. You may still find instances where they nest and rummage in wet heaps but this is not common.

Weil's Disease, also known as *Leptospirosis*, is a rare, but serious, disease carried by rats. It can be contracted by exposure to water or wet surfaces that are contaminated by rats' urine. It is highly unlikely that pupils would come into contact with such contaminated environments whilst going about their normal gardening activities. Young people should be reminded regularly to wash their hands thoroughly and not to put their fingers in or near their mouth. The incubation period is usually 7-12 days. Symptoms include fever, chills, muscular aches and pains, loss of appetite and nausea. In the later stages there may be bruising of the skin, sore eyes, anaemia, nose bleeds and jaundice. If symptoms appear, contact a doctor.

Use of hand tools

Young people should be taught the correct way to use tools and basic health and safety aspects. It is perfectly acceptable for young people to use a normal set of hand tools but make sure that the equipment is not too large or heavy for them to use safely. See section B3.2 about using tools.

Using tyres as growing containers

Garden Organic does not recommend using tyres as containers in the garden. Tyres are made for road use and have been tested for that purpose. They are not manufactured as plant containers and so no thorough trials have been done on safety in this context. Research from the USA and Australia has shown that there is the possibility of zinc contaminating the soil as tyres degrade. Experiments have also been conducted using ground rubber as part of potting media and this has resulted in plant death.

The only firm conclusion we can draw at this time is that zinc in tyres can be toxic to plants. How much zinc or other contaminants leach from tyres and at what stage of decomposition they become a hazard to plants we do not know. We also have no research to show what levels of contaminants are hazardous to humans. Our advice is that it is better to use a different material known to be safe such as untreated wood, plastic or terracotta.

Poisonous plants

Many plants in the garden may be toxic in some way and it's important not to become overly cautious about this but take a practical view. Teach pupils not to put any plants or berries in their mouths and always check with an adult before eating any produce. Make pupils aware of any plants that could cause discomfort or injury such as stinging nettles, plants with thorns or hooks (eg roses, brambles) or sharp leaves (eg pampas grass).

Top tip

Tell everyone the following

- The need for good behaviour for safety reasons.
- Hazards associated with ponds, eg falling into the water, slippery rocks, blue/ green algae, Weil's Disease.
- Any cuts or grazes to hands should be covered with waterproof plaster before pond-dipping.
- Keep hands away from face and wash hands after contact with pond water.
- First aid and emergency procedures.

Water

Never let pupils out of sight near water, whether a lake or pond. Wherever possible, fence off the area or install a steel mesh across a pond.

Information Disclaimer

Whilst Garden Organic/Food for Life Partnership has made every effort to keep the information in this publication accurate, the Health and Safety advice and guidance notes are included on the basis that the content is to the best of its knowledge accurate at the time of publication. The advice and guidance offered is intended for general information purposes only and is not intended to be a substitute for professional health and safety advice guidance or training. Garden Organic/Food for Life Partnership disclaim any warranty or representation, expressed or implied about the accuracy, completeness or appropriateness of such Health and Safety advice and guidance for any particular purpose.

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Activities on DVD	 A4 Health and Safety Audit A5 Sample Risk Assessment T3 Health and Safety Audit T4 Garden Risk Assessment
Further information	Royal Society for the Prevention of Accidents (RoSPA) www.rospa.com Health and Safety Executive www.hse.gov.uk Royal Horticultural Society www.rhs.org.uk Food for Life Partnership www.foodforlife.org.uk/resources



SGI.3 Manual Handling and back care



Gardening is an enjoyable and rewarding activity, but can also be physically demanding. Years of bending and lifting can take their toll if you don't take care of yourself. Fortunately, there are some basic rules you can follow to help avoid damaging your back and manage any back pain you may already have. Once practised, these become second nature and will help keep you healthy.

Handling and Lifting technique

Lifting – Make sure:

- The area and route are clear of obstacles.
- You have a good grip on the load.
- Your hands, the load and any handles are not slippery.
- Be careful if there are any sharp edges.
- Get someone to help you if the load is too heavy.
- Use the appropriate equipment to help move the load if necessary, eg a wheelbarrow or sack truck.



Bad Practice: Single stage lift with bent back

Good Practice: Two stage lift I bend knees and grasp load

2 Push up with legs keeping back straight

Manual Handling

Do

- Place your feet evenly either side of the load, with
 Twist or bend your back. your body as close as possible to the load.
- Bend at the knees.
- Grasp the load firmly.
- Use your leg muscles to push upward into a standing position.
- Keep your back straight.
- Pull the load as close as possible to your body.

Do not

- Bend at the waist.
- Try to lift items that are too heavy on your own.
- Rush when lifting heavy loads.
- Grab heavy loads with one hand, such as half-full bags of compost.

Repetitive Strain Injury

Repetitive Strain Injury (RSI) and Cumulative Trauma Disorder (CTD) are painful conditions that are caused by the same movement being repeated continuously. CTD is also caused by vibration, force and cold.

Try to keep the use of power tools to short periods. Where possible, alternate between working with vibrating power tools and other hand tools as the constant use of vibrating tools can increase the risk of wrist injuries and 'vibration white finger'.

Back Care

General gardening tasks

- Use a kneeling pad. The ones with handles at the side will help you in standing up.
- Make raised beds at a height and width that makes it comfortable for whoever is using them.

Wheelbarrows

 Don't lift and push too much weight. If the load starts tip over, let it go, rather than putting excess twisting pressure on your back to stop it.

Work bench

 Potting and glasshouse benches should be at elbow height to avoid stooping or reaching.

Digging

- Do a few warm up exercises before you start digging. This prepares your muscles for the work to come.
- Work only for short periods, taking a break from digging at least every half an hour. This gives the muscles in your back time to relax.
- If you feel a twinge in your back, stop. This is your body's way of saying it's time for a rest.

Mowing

• If you already suffer from problems with your back, consider changing to a mower with electric ignition or an electric mower. Trying to start a stubborn lawn mower can put a strain on your back. The same goes for any other petrol powered equipment.

Some general points

- Take regular exercise between gardening sessions to keep fit.
- Use a stepladder if working with trees or bushes that are above head height.
- Vary your gardening with different tasks. This will reduce the risk of repetitive strain injuries.
- Make sure anyone you're working with is familiar with these techniques.

 Further
 Health and Safety Executive www.hse.gov.uk

 information
 Del Construction

BackCare www.backcare.org.uk



Take care when leaf raking.

• When working at ground level to plant, do not

• Where possible, use tools that have an appropriate

handle length for your body height, ie not too short

to avoid excessive bending and not too long to make

bend your spine. Use knee-pads which will reduce

Gardening at ground level

Long-handled tools

the impact on your back and knees.

using the tool difficult or dangerous.



SG2.I Training



Good training is the foundation of successful food growing in your school. The key skills were introduced in the Bronze Award booklet with examples of how to train groups and approach people for support. This section looks at a broader palette of skills needed for sustainable achievements at Silver and Gold level. These include promotion, working together and planning for the future, and apply equally to pupils, teachers and members of the community. This culminates in formal training in land-based careers to further your growing skills.

Community training	Page 97
Working in teams	Page 98
Writing a press release	Page 101
Planning advertising	Page 103
Raising funds	Page 105
Land-based courses/training	Page 107
Land-based careers	Page 109
	Working in teams Writing a press release Planning advertising Raising funds Land-based courses/training



SG2.2 Community training



Providing training helps to create links with the community that last long after the training has finished. It opens up opportunities to widen the skills of supporters by teaching them different skills and gardening techniques. It also promotes food growing skills to the wider community. This section includes case studies from Food for Life Partnership schools.

Why provide training?

- Provide key community members with training, or information on local courses, to help develop their skills in organic food growing activities.
- Increase participation by getting pupils to act as trainers/mentors.
- Encourage parents and community members to support the school garden and start growing at home by providing during and out of school hour training sessions.
- Cascade information to friends and colleagues.
- Inspiration for future careers.

Examples of how schools have done this

Archbishop IIsley High School, Birmingham

As part of a parents' evening, pupils set up a display about composting and ran the composting 'Yes/No/Maybe' game with parents (see A24). They then extended this by putting a quiz in the school newsletter asking readers to select compostable items from a list. The answers were given in the following newsletter and a prize awarded to the winner.

Middleton Primary, Leeds

After receiving compost training, pupils discussed how they could share what they had learnt and decided they would like to train the teachers and governors. They then prepared and delivered a compost training session. They have also run sessions at conferences.

Manchester Creative and Media Academy (Girls)

Pupils and teachers trained community members of all ages at the Moston Festival. They were joined by pupils from Manchester Creative and Media Academy (Boys), and together they demonstrated how to make paper pots, sow pea seeds and plant trays of mixed herbs to take home.



Manchester Creative and Media Academy (Girls) – Seed sowing.



Manchester Creative and Media Academy Girls/Boys – Planting in containers.



Archbishop IIsley High School - Composting.



SG2.3 Working in teams



Gardening can be a solitary activity where you can relax in the peace and quiet of the garden. There are times however when you'll be working with others to get a bigger job done, such as clearing a neglected area or organising a school garden event for the community. This section describes how to get your team working effectively.

Benefits of team working

Working in a team can be very beneficial because individuals all have different strengths and weaknesses. One person may be good at using the computer, someone else in the team may not, but could be more knowledgeable about different gardening techniques. A third person may be good at organising and so on. Between everyone, there will be more strengths than any one single person can provide.

It may not always be easy working in a team, but there will always be someone to talk to if you have a problem. You can also enjoy celebrating your collective successes and achievements together.

Attributes of an effective team

The members have a mix of skills which together enable them to do a range of different tasks well.

The group is well organised with a sense of purpose, and good leadership.

The members put the achievements of the team above individual success.

They know each other's strengths and weaknesses, and encourage feedback, suggestions and ideas.

In a crisis, everyone pulls together.

All team members keep each other up to date with what's happening.

The team has a sense of identity, eg by having a team name or badges.



Making a herb spiral at the Lancaster Girls Grammar School.



Planting fruit trees at Ryton gardens.

Top tip

Ways you can contribute to a team

- Communicate regularly with other team members.
- Put the team before yourself.
- Try and get on with other people, even if they annoy you.
- Remember to thank people who have helped you.
- Don't take all the credit for something achieved by the whole team.
- Share the blame when someone else in the team makes a mistake.
- Be loyal on good, bad and ordinary days.

Targets and responsibilities

Your team will have targets and responsibilities for doing certain tasks. Other people, and other teams, within the school and wider community will be relying on you to do these on time and to a good standard. It's therefore important to be clear about what you're there to do and communicate this to all other parties. This will help complete your tasks to the best of your abilities.

How to bring ideas to life

- Listen with interest and respect to what team members say.
- Pursue what makes ideas different and interesting.
- Acknowledge and record every idea as it comes up.
- Encourage a quantity of ideas. Quality will soon become evident, so you can select the best.
- Allow time for thinking.

Top three team member attributes

Τορ tip

The team's objectives

At the first meeting of the team discuss the key points below.

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- What is the goal of this project?
- What is our deadline?
- How often will we meet?
- What is our budget?
- Who is in charge of implementing our ideas?
- What roles and responsibilities will each of us have?

Reliability	It can really slow the progress of the team if people aren't reliable. If you commit to completing something by a certain time, make sure you do it. If you say you'll attend a meeting, be on time. This also applies to the quality of the work you produce for the team. Make sure your work is of a consistently good standard.
Communication	Be involved and participate in discussions. If you have an alternative to an existing idea that might be more effective, share it with the group. If people discuss a plan that you think is great, then tell them. They might really need and appreciate your support. Stay positive and respectful, even if you disagree with someone. Try to be objective and fair.
Flexibility	It's important to be flexible to be able to respond to changes positively. People may join or leave the group, budgets may be reduced or goals redefined. By staying flexible, you can take advantage of the new opportunities that arise during the project, and you'll be able to help others do the same.



Working as a team to build raised beds at Shipston High School.



Pupils at St Peters School working as a team: planting, weeding and harvesting.

Stages of team development

A team needs time to start working well together. There are four usual stages that it's useful to recognise from the start. They culminate in optimal performance.

1	Forming	 The group is just coming together, and may still be seen as a collection of individuals. Everyone tries to impress their own personality on the group while its purpose, composition and organisation are being established. Everyone is trying to find out about each other.
2	Storming	 This stage involves open conflict. Changes may be suggested to the group's original objectives, leadership and procedures. Whilst forming involves towing the line, storming brings out team members' own ideas and attitudes. There may be disagreement as well as creativity.
3	Norming	 This is a stage of settling down. Agreements are reached about work sharing, output levels and group customs. Enthusiasm and creativity may be reduced, but procedures are established which enable methodical working to be introduced and maintained. This does not mean that new ideas are discouraged, rather that a reasonable hearing is given to everyone and consensus (often involving compromise) is sought.
4	Performing	 At this stage the group concentrates on accomplishing the task. Even at the earlier stages some performance will have been achieved. When performing, the difficulties of growth and development no longer get in the way of the group's task.



SG2.4 Writing a press release



Press releases let people know about a recent achievement in your school garden or forthcoming event. These snappily written documents are sent out to the press and other local media whenever you want to inform people of newsworthy garden events. Press releases aren't adverts as such, but they can result in useful publicity and contacts for future growth.

When to send out a press release

Brainstorm with your colleagues when press releases could benefit your school garden and celebrate the people involved. The following are some common reasons.

- Forthcoming event.
- Calling for volunteers/equipment to help maintain and develop the school garden.
- School achieving the Bronze/Silver/Gold Mark Award.
- School helping to preserve old and unusual varieties of plants.
- Bumper harvest, eg giant pumpkin.

Compiling a press release

When editors receive a press release, they may publish it in full or as an edited version, or contact the writer to find out further details. Only a small percentage of press releases received by editors are actually used. To help ensure your press release is in this group, follow the guidelines below.

Notification	Write 'FOR IMMEDIATE RELEASE' in the upper left-hand margin, just under your letterhead. Capitalise the whole phrase.
Contact Information	List the name, title, telephone number and email address of your spokesperson. Make sure they're available in the days following the press release.
Headline	Use a bold typeface. Compose an appropriate, eye-catching headline.
Date	Don't forget to date the press release.
Opening	A good opening paragraph is essential to grab the editor's (and ultimately the reader's) attention. Give the main essence of the message in this opening, such as the five W's, (see Top tip box on next page).
Middle	More information on the points given in the opening. It is often useful to include a quotation from a key person. These paragraphs should be short and self-contained so that the editor can cut them out if necessary without ruining the sense or the flow.
Close	A conclusion or a summary may be appropriate at the close, or a brief repetition of the main message.

- Make sure the information is newsworthy; ask a friend, review the type of stories that already have press coverage, etc.
- Write using the 'third person'. Write as though you are a newspaper reporter, talking about your school as an outsider.
- Make sure the first 10 words of your release are effective, as they are the most important.
- Do not make your press release sound like an advertisement or invitation.
- Write in an interesting, concise style with short sentences, using exciting wording and innovative angles.
- Try to appeal to human interests where possible.
- Provide as much contact information as possible, eg name of individual to contact, address, phone, email, website address.

Template press releases

T9 on the DVD has two example press releases for school garden projects as part of the Food for Life Partnership. These templates can be edited and parts extracted for your own customised press release.



The five 'w's

Your press release must answer the following questions, ideally in the first line.

- What is happening?
- Who is involved?
- Where is it happening?
- When is it happening?
- Why is it newsworthy?



SG2.5 Planning advertising



There may be times when you'll want to advertise a food related or school garden event to boost local interest and attendance, such as a plant sale/swap or a fruit and vegetable stall. Fortunately, there are lots of methods available for advertising. The following hints and tips will help you decide which route to choose.

Most useful forms of advertising

Faced with a wide range of options, you need to have a clear idea of your target audience, budget, timescale and desired outcome. Schools have used each of the following forms of advertising successfully, after simple planning to decide the following.

I Clear message you want to convey and who would be interested/benefit, eg 'plant sale on 3rd August, good value plants grown by your local school'.

Display advert in a newspaper	These may incorporate a variety of font styles and sizes, artwork and colour. Charges are normally based on the number of column centimetres, often with a minimum size. Sometimes newspapers will write an article about your event for free.
Posters	Posters are around us everywhere: office notice boards, doctors' surgeries, supermarkets, libraries, etc. A poster contains essential information, attractively displayed to grab attention among lots of competition.
Local radio	Your local radio station will advise you and offer suggestions on how to get your message to the right people, at the right time, eg free 'what's on' feature and radio website.
Local organisation newsletters	Newsletters are used by organisations to keep their members informed about matters of interest and local events. They are usually published monthly or quarterly, sent out by post or email.
Letter to parents/ guardians	A letter is easy to produce and can be distributed quickly. See B6.5 in the Bronze booklet for guidelines how to lay out a letter.
Word of mouth	Cascade information informally to friends, family and others.

2 Most cost effective advertising that would reach the greatest number of target people, eg parents.

School newsletters	Regular updates keep the audience informed and maintain interest in the project.
and website	

Guidelines for writing adverts

Present your message in an interesting and attractive way.

- Use your school logo, prominently displayed.
- Have a catchy headline.
- Use spacing effectively.
- Categorise information use sub-headings, bullet points.
- State the action you want the reader to take.
- Make it eye catching so that it stands out from others.
- Use different font sizes.
- Use images.
- Use colour (no more than four or it can be distracting).
- Remember to add contact details.
- Be sure to include all the vital information venue, date, etc.

See example advert below

Τορ tip

Use AIDA when displaying information

Attention – attract the reader's attention.

Interest – get the reader's interest by saying something that will appeal to them (this may need research).

Desire – arouse the reader's desire, eg to attend an event.

Action – prompt the reader to do something; add urgency if appropriate, eg offer a discount/free gift if they respond by a particular date.





SG2.6 Raising funds



A little money goes a long way in a school garden, funding developments such as new raised beds, trees for an orchard or even a greenhouse. This section explains common sources of funds and processes to follow to raise money for specific projects ('restricted funds') or for more flexible use ('unrestricted funds'). This section builds on former guidance in **B7.7**.

Potential supporters

Charitable trusts	There is a huge range of both local and national trusts, funding all manner of projects. Make sure you are aware of their application procedure and deadlines.
Community and professional groups	Groups such as Rotary Clubs and Round Tables may be interested in fundraising for your project. It's also worth contacting local clubs with an interest in gardening or cooking.
Corporate supporters	Approach local companies, and local branches of national companies - many will be happy to support their local community, and most national companies will have a Corporate Social Responsibility policy. You may also be able to source gifts in kind, rather than financial donations, if you need tools, compost, etc. Many waste disposal companies operate grants schemes for projects in the local area of a landfill site.
Friends	Local people may like to become 'Friends' of your project, usually for a minimum donation, eg from $\pounds 10$. You could advertise your 'Friends' scheme in the local press, in letters to parents and at school events.
Local Government	Your local authority may also have a range of grants – contact your town, borough or county council for details.
School community	Sponsored challenges, eg running a marathon. These can be organised independently or through organisations such as Adventure Café, Just Give and Charity Challenge. Ideas for less energetic activities include coffee and cake mornings, gardening shows, fashion shows, and music nights. The only limit is your supporters' imagination!

Tailor your proposal

- Know your audience. What type of project does your potential funder usually support? Are they more interested in environmental projects or helping young people?
- Keep it short. As a general rule, two-three sides of A4 would be enough for applications for up to $\pm 1,000$; three-four sides for up to $\pm 4,000$.
- Include quotes. Preferably from a potential beneficiary, or the project leader.
- Illustrate project need with case studies. This can be as short as a couple of sentences, or for larger grant applications, a couple of paragraphs. Stories of change are good and add human interest.
- Include photos. These add interest or help to illustrate a concept.
- Research facts and figures. Justify the need for the project (eg background statistics on young people's access to nature); also the projected impact of the project.

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Writing a funding application

Supporters will be looking for a worthwhile, well-organised, clearly defined project with specific aims. They may also want measurable outcomes and clear beneficiaries, ie people who will benefit. When writing a proposal it is best to include the following.

Background to project	 What need are you addressing with this work? Examples include extending the growing area, supplying more produce to the kitchen. Background on your school, eg number of pupils, how many are involved in the garden, importance of gardening/food related work to education.
Details of the project	 Project aims, running time, location, who benefits, etc. What is unique or special about the project? Why is your school a good organisation to deliver the project – what experience do you have in this area?
Expected outcomes	 How many people will benefit? This may be direct beneficiaries, such as pupils involved in growing, and indirect beneficiaries, eg families more involved in the school and inspired to start growing/cooking at home. How will you use the produce grown? Examples include seasonal cookery lessons, selling locally, harvest festival, etc.
Timescale	 How long is funding required? Include project milestones if needed, ie interim stages of development.
Future sustainability	• How will you continue the project once the funding period has ended? This is particularly important if larger donations are initially received.
Budget	 How much money are you asking for and intended use? Include total project costs, and if further funds are required, include details of other funders approached/agreed to fund part of the project. Give a 'shopping list' of options and a range of costs, eg '£200 could help us buy tools, £600 a greenhouse/polytunnel, £1,000 host a seed growing day event'.
Monitoring and evaluation	 How will you know if your work is successful and has met its aims? How will you let the supporters know your progress? Most will appreciate (or sometimes require) a report, so let them know when they can expect an update, eg every six to twelve months. How will you acknowledge your supporters? Examples include plaque, mention in school reports, invitation to open school events, etc.
Contact details	• An obvious point, but essential.

Activities on	AI Hosting an annual event
DVD	TI Event checklist
Further	B7.7 Funding
information	Adventure Café www.adventure-café.com
	Charity Challenge www.charitychallenge.com



SG2.7 Land-based courses/training



Through involvement with the school garden, you may feel that you would enjoy working in a land-based environment, but want to know more about what qualifications would be beneficial. This section describes the different levels of qualifications and provides information on the subjects available. For information on land-based careers, see SG2.8.

What do the different qualifications mean?

GCSE	General Certificate of Secondary Education. It's highly valued by schools, colleges and employers, so will be useful whatever you are planning to do.
AS and A Levels	AS (Advanced Subsidiary) and A (Advanced) level qualifications focus on traditional study skills. Each part makes up 50 per cent of the overall A level grade. An AS level can be a free-standing qualification or be valued as the first half of the full A level. They are one of the main routes to higher education.
Diploma	There are many different types of Diploma that are offered at various institutions, including the Royal Horticultural Society, Royal Botanic Gardens Kew, etc. There is also a new qualification for 14-19 year olds. Diplomas are available in five subject areas in selected schools and colleges around the country. More subject areas will become available in future years.
NVQ	National Vocational Qualification. This is a competence-based qualification; you learn practical, work-related tasks designed to help you develop the skills and knowledge to do a job effectively.
BTEC and OCR Nationals	Work related qualifications, available in a wide range of subjects. Many have been designed in collaboration with industry. The qualifications offer a mix of theory and practice, and can also include an element of work experience.
HNC and HND	Higher National Certificates and Higher National Diplomas. These are work- related higher education qualifications. They can also count towards membership of professional bodies.
Foundation Degree	The qualification is broadly equivalent to the first two years of a bachelor degree. They can offer a route into higher education.
Bachelor Degree: BA, BSc, etc	A bachelor degree is a course of academic study. It usually takes three to four years to complete full time.
Postgraduate	Most types of postgraduate qualification include taught and research elements. Some require that you already have a bachelor degree. Generally, they lead to four types of qualification, ie postgraduate certificates, postgraduate diplomas, masters degrees, and doctorates.

What subjects would be useful?

The following are just a sample of the subjects that would be useful to study if you are considering a landbased career.

- Agricultural crop production
- Agriculture
- Arboriculture
- Biology
- Botany
- Chainsaw and related operations
- Countryside management
- Crop science
- Ecology
- Environmental and land-based studies
- Environmental conservation
- Environmental science
- Forest machine operations
- Forestry
- Garden design
- Geography
- Geology

- Horticulture
- Land and environment
- Land economy
- Land-based operations
- Landscape and amenity management
- Landscape design
- Mixed farming
- Permaculture
- Plant biology
- Rural administration
- Rural and countryside management
- Rural enterprise and land management
- Rural estate management
- Seed and crop technology
- Soil science
- Tree surgery
- Turf technology

Certificate in Organic Horticulture

Garden Organic has worked with City and Guilds to produce a Certificate in Organic Horticulture. Your local college may be running this or you can contact City and Guilds to find a local provider.

Soil Association Organic Farm School

This is supported by the Daylesford Foundation. It hosts a series of hands-on courses in growing your own food, rearing animals, cooking and rural crafts. The courses cater to all skill levels and provide the opportunity to learn from organic farmers with personal experience.

Look on the websites listed below to find more in-depth information on the different career options, the qualifications you will need and range of salaries. These sites also give you help with writing your CV, completing application forms and interview skills.

Further	SG2.8 Land-based careers
information	Garden Organic www.gardenorganic.co.uk
	Soil Association Organic Farm School www.soilassociation.org/Takeaction/Learning/Organicfarmschool
	City and Guilds www.nptc.org.uk
	Connexions www.connexions-direct.com
	The Careers Advice Service www.careersadvice.direct.gov.uk
	Lantra www.lantra.co.uk
	Royal Botanic Gardens, Kew www.kew.org
	Royal Horticultural Society www.rhs.org.uk





SG2.8 Land-based careers



Having started gardening, you may like to pursue a career in this exciting type of work, but don't know what jobs are available or where to find information. This section gives you a flavour of the range of opportunities available and where you can go for further advice and recruitment. This builds on courses and training suggestions in SG2.7.

Opportunities

Job title	Role
Agricultural scientist	 Research methods of farming and then test them on experimental farms. Usually specialise in one science area, eg plant, animal, crop or soil.
Agronomist	 Research methods of using plants for food, fuel, feed, and fibre. Encompasses work in the areas of plant genetics, plant physiology, meteorology, and soil science. Applies a combination of sciences such as biology, chemistry, ecology, earth science, and genetics. Involved with issues including producing food, creating healthier food, managing environmental impact of agriculture, and creating energy from plants. Usually specialise in areas such as crop rotation, irrigation and drainage, plant breeding, soil classification, soil fertility, weed control, insect and pest control.
Arboricultural worker/tree surgeon	 Work with trees and shrubs in cities, the countryside and conservation areas. Work as planters, climbers/tree surgeons or ground staff.
Arboriculturist	 Responsible for the production and management of trees and shrubs in cities, the countryside and conservation areas. Make sure that trees and shrubs are planted and maintained in an attractive and safe way.
Botanist	 Study plants, from trees and flowers to algae, fungi, lichen, ferns, grasses and mosses. There are many different roles, eg field research, monitoring plant species and conservation work.
Countryside ranger/ warden	 Protect, manage and enhance wildlife habitats. Work in an area open to the public and ensure that people can use, enjoy and understand the countryside alongside plants or animals.
Ecologist	 Study plants, micro-organisms and animals, and their interactions with one another and the non-living components of the environment. Carry out a wide range of tasks relating to specialist area of knowledge, eg freshwater, marine, terrestrial, microbial systems, fauna or flora.

Environmental scientist	 Seek to understand the natural world and how it is affected by human activities. Address issues such as land management and conservation, climate change, flood control, population growth and alternative energy supplies.
Farm manager	• Run a farm efficiently and profitably.
Farm secretary	Look after the business side of a farm or estate.Deal with paperwork and financial matters.
Farm worker	 Carry out manual work on farms. Work varies from season to season and involves planting, tending, harvesting and storing crops such as vegetables, cereals and energy crops.
Forest officer/ forester/ woodland manager	 Responsible for planning and directing activities that develop and protect forests and woodland.
Forest worker	 Care for and manage woodland areas and forests. Protect ecological and animal habitats, and enhance the future landscape of the UK.
Garden designer	 Design gardens to suit the requirements of clients and their homes. Design gardens in places open to the public or temporary gardens for special celebrations and events.
Gardener	 Grow and look after plants in many different settings, eg public and private gardens, sports facilities and nurseries. Manage and maintain gardens or open spaces used for different activities.
Greenkeeper	 Responsible for the maintenance and overall appearance of a golf course. Maintain a good playing surface and ensure the course offers a consistent challenge to golfers.
Groundsperson	• Maintain and care for a range of natural and synthetic sports surfaces such as tennis courts, bowling greens, cricket, football and rugby pitches.
Horticulturist	 Grow plants on a large-scale basis. Work in any of the following areas: Garden centres Wholesale/retail plant nurseries Planning, designing and maintaining parks, botanic gardens, woodlands and estates Production of fruit and vegetables, plants and flowers
Land-based engineer	• Design and develop new equipment and technology to make industries such as agriculture and horticulture more efficient and productive.
Landscape architect	 Planning, designing, supervising work on, and managing the external environment. Key role in developing sustainable communities and regenerating towns and cities across the country.
Landscaper	 Construct and maintain gardens, parks, sports grounds, planted areas around business and retail parks, and other outdoor areas. Work on interior landscaping projects, eg in shopping centres, offices and hospitals.
Rural surveyor	 Manage the interests of landowners and tenants of rural properties. Manage one or several estates, and advise on the law, rural estate management, forestry and woodland management, conservation, agricultural matters and developing the non-agricultural use of rural land.

Apprenticeships

An apprenticeship provides a mutually beneficial arrangement between the employer and the apprentice. It allows the apprentice to gain hands-on experience and learn the practical skills as well as the theory, whilst contributing to the business workforce. The schemes are generally for two years and involve a work-based placement with the practical tuition supported by a programme of seminars.

Need help with your career choice?

- Have a chat with your school careers co-ordinator. They can help you with your options and also where to get more information and help.
- Speak to a Connexions personal adviser. They are specially trained to help you sort out personal and career issues. Watch out for information about when they are in school.
- Look on the websites listed below to find more in-depth information on the different career options, the qualifications you will need and range of salaries. These sites also give you help with writing your CV, completing application forms and job interview skills.

Examples of apprenticeships

Organic Apprenticeship Scheme

A two year course run by the Soil Association, which involves a work-based placement with an organic farmer or grower and eight structured seminars per year.

Biodynamic Apprentice Training

The Biodynamic Agricultural Association offers a practical twoyear training scheme in biodynamic agriculture and horticulture. Work placements are usually on a farm and practical tuition is by weekly tutorials and a programme of seminars and block courses.

Further	SG2.7 Land-based courses/training
information	Connexions www.connexions-direct.com
	The Careers Advice Service www.careersadvice.direct.gov.uk
	Careers Centre at Writtle College Chelmsford, Essex www.growing-careers.com
	Horticulture Week www.hortweek.com/careers
	Land-based jobs online www.land-force.com
	Lantra www.lantra.co.uk
	Farmers Weekly www.fwi.co.uk
	Environmental jobs online www.environmentjob.co.uk
	Biodynamic Agricultural Association www.biodynamic.org.uk
	Soil Association www.soilassociation.org



SG3.1 Reference material



By working through the Food Growing Manual, you will have gained basic gardening skills and experienced the joy of harvesting and eating your own organically grown food. This section is packed with information to help expand your knowledge further, from definitions of unfamiliar gardening terms to websites and literature for further research.

SG3.2	Glossary	Page 113
SG3.3	Book list	Page 114
SG3.4	Useful websites	Page 115
SG3.5	Frequently asked questions	Page 116



SG3.2 Glossary

This section defines new terms introduced in this booklet. See also Bronze booklet for a further glossary of terms, section B7.2.

Term	Definition (words in italics have their own entry)
Additional feed	Liquid or granular plant feed for extra nutrition. See S4.5 for how to use.
Biological control	Natural organisms introduced for pest control, eg small parasitic wasp to eat greenhouse whitefly. See G4.11 for examples and suppliers.
Division	Divide a rootball to make new plants. See A44 for technique.
Fruiting wood	Growth that produces fruit, eg one year old canes on summer raspberries. See G4.10 for more examples.
No-dig gardening	Spread soil improver (such as compost) over the soil surface rather than digging in. See G4.3 for details.
Pollination groups	Describes flowering times of different fruit <i>varieties</i> , eg group 'B' apple varieties flower at the same time so are planted together to ensure fruit set. Fruit nurseries can advise on which varieties belong to each group.
Potting mix	Specially formulated growing medium for plants in pots and containers. See A38 for recipes.
Propagation	Increasing plants, ie by sexual reproduction using seeds (A18), or 'vegetative' propagation using plant roots and shoots, ie <i>division</i> (A44) or stem cuttings (A58).
Propagator	Equipment for <i>propagation</i> of plants in a protected, often heated environment, eg for better germination or <i>stem cuttings</i> . See A57 for an example propagator design.
Protected cropping	Growing crops with protection from adverse weather to advance growth. Includes cloches, cold frames, and horticultural fleece. See G4.9.
Pruning	Cutting off selected growth so the healthiest and most productive shoots remain, eg <i>fruiting wood</i> . See G4.10 and A61 for techniques.
Rootstock	A set of roots from one plant attached ('grafted') to the <i>variety</i> of another, usually to control tree vigour/size, eg apple <i>variety</i> 'Katy' grafted onto the rootstock 'M9' to produce a tree up to 2.5m tall.
Square foot gardening	Planting layout designed to grow a range of crops in a small plot, each crop in one of 16, one foot square areas. See A59.
Stem cutting	Remove a short stem to make a new plant. See A58 for technique for soft and hardwood cuttings.
Training	Tailor the natural shape of a plant, eg for better fruiting or to fit a space, eg espalier apple trees against a wall. See G4.10 and A61.
Variety	Natural plant variances, selected and developed by plant breeders for better crop flavour, size, uniformity, timing of harvest, pest/disease resistance, etc.



SG3.3 Book list

See also book list in the Bronze booklet, section B7.3.

Title	Author/Editor	Publisher
Asian Vegetables – A Guide to Growing Fruit, Vegetables and Spices from the Indian Subcontinent	Sally Cunningham	Eco-logic Books/ Worldly Goods
Back Garden Seed Saving – Keeping Our Vegetable Heritage Alive	Sue Stickland	Eco-logic Books
Compost – The Natural Way to Make Food for Your Garden	Ken Thompson	Dorling Kindersley Ltd
Composting With Worms – Why Waste Your Waste?	George Pilkington	Eco-logic Books
Fighting Like The Flowers – The Life Story of Britain's Best Known Organic Gardener	Lawrence D. Hills	Green Books
Green Essentials – Attract Wildlife	Richard Jones	Impact Publishing
Green Essentials – Create Ponds	Richard Jones	Impact Publishing
Grow Organic (Made With Care)	In association with Garden Organic	Dorling Kindersley Ltd
Heritage Vegetables – The Gardener's Guide to Cultivating Diversity	Sue Stickland	Gaia Books Ltd
How to Store Your Garden Produce – The Key to Self-Sufficiency	Piers Warren	Green Books Ltd
Organic Alice and the Ladybird Helper	Jenny Hall	Sow and Grow Organics
Organic Alice and the Vegetable Box Scheme	Jenny Hall	Sow and Grow Organics
Organic Alice and the Wiggly Jiggly Worms	Jenny Hall	Sow and Grow Organics
Organic Alice Let's Grow Vegetables	Jenny Hall	Sow and Grow Organics
Organic Gardening: The Whole Story	Alan and Jackie Gear	Watkins Publishing
Organic Kitchen Garden	Juliet Roberts	Conran Octopus Ltd
Seed Saver's Handbook	Jeremy Cherfas, Michael and Jude Stanton	Grover Books
The Book of Weeds – How to Deal With Plants That Behave Badly	Ken Thompson	Dorling Kindersley Ltd
The Complete Book of Vegetables, Herbs and Fruit – The Definitive Sourcebook for Growing, Harvesting and Cooking	Matthew Biggs, Jekka McVicar and Bob Flowerdew	Kyle Cathie Ltd
The Thrifty Gardener – How to Create a Stylish Garden for Next to Nothing	Alys Fowler	Kyle Cathie Ltd
Valuable Vegetables – Growing for Pleasure and Profit	Mandy Pullen	Eco-logic Books
Vegetable Growing Month-By-Month: The Down-to- Earth Guide That Takes You Through the Vegetable Year	John Harrison	Right Way



SG3.4 Useful websites

See also useful websites in the Bronze booklet, section B7.4.

Name of organisation	Type of resource
Garden Organic	
Garden Organic www.gardenorganic.org.uk	Information about organic gardening, composting, Heritage Seed Library and membership.
Garden Organic for Schools www.gardenorganic.org.uk/schools	Curriculum links, leaflets, posters and factsheets, seeds, help and support.
Home Composting www.homecomposting.org.uk	Information on what and how to compost, hints and tips, frequently asked questions.
The Organic Gardening Catalogue www.organiccatalogue.com	Mail order catalogue. Seeds (many organic), information, gardening sundries and books.

Gardening related	
Eat Seasonably www.eatseasonably.co.uk	Eat Seasonably helps you enjoy fresh fruit and veg at its seasonal best.
l'm in Season www.iminseason.com	This website is a great resource with advice and tips about seasonal fruit and vegetables.
Grow Veg www.growveg.com	A garden planning tool which helps you grow fruit and vegetables, whatever the size or shape of your garden or plot. Also gives growing tips and advice.
Grow Your Own Grub www.growinggrub.co.uk	Help and advice for any schools that want to run an outdoor food- growing project with links to healthy eating and healthy cooking.
Gardening with Children www.gardeningwithchildren.co.uk	A website specially designed to be an interactive classroom, allotment plot, and hobby garden of the 21st century.

Other related organisations		
School Food Trust www.schoolfoodtrust.org.uk	Has useful resources on seasonality and using produce.	
The Field Studies Council www.field-studies-council.org	An environmental education charity committed to helping people understand and be inspired by the natural world.	
The Open Air Laboratories (OPAL) www.OPALexplorenature.org	OPAL is a partnership initiative celebrating biodiversity, environmental quality and people's engagement with nature.	
School Food Matters www.schoolfoodmatters.co.uk	A website about school food and food education. With fun ideas to get children cooking, growing and out onto a farm.	
Climate Friendly Food www.climatefriendlyfood.org.uk	Climate Friendly Food works to encourage farming and growing practices that produce quality food, whilst sequestering carbon in the soil and plants.	



SG3.5 Frequently asked questions

Question	Answer
How do I prune and train my fruit trees and bushes?	Each type of fruit has its own techniques, but they're all united by getting the best fruiting quality from available space, eg cutting out less productive growth to favour 'fruiting wood' that is growing in the right place. See G4.10 and A61 for instructions for major fruit crops, as well as reference books such as 'Pruning and Training' by the Royal Horticultural Society (ISBN 1405315261).
I'm already growing crops, so how do I start my crop rotation without completely starting again?	Crop rotation is about moving annual vegetable plants that only live for one season, most dying off in the autumn or following spring after planting. So, if your main growing season has already started, then carry on planting as planned, but in the meantime, plan your crop rotation to start as soon as possible, eg next spring. You may find that some crops will have to grow in the same place they did the year before during your first year of rotation. Unless there are known soil pests/ diseases affecting that family, this shouldn't be a problem so long as full crop rotation follows. The priority is to introduce a system, from now on, where no one family grows in the same space more than one year in four. See S3.2 for step by step instructions for planning a crop rotation.
How do I maintain my crops during the summer holidays?	This relies on good community involvement and school arrangements so people can visit your growing area during holidays. Holiday care also relies on good gardening so your plants are better able to cope with less attention, eg see S4.10 about installing watering systems and A39 about mulching to conserve soil moisture and suppress weeds. Also choose crop varieties you can harvest before or after the holidays to avoid wasting produce. See www.organiccatalogue.com for example varieties. See also B4.11 for other holiday care ideas.
How do I grow crops to harvest in the spring term?	This starts the previous spring when several winter cropping plants need to be sown, eg Brussels sprout, cabbage, leek, etc. Other winter crops such as salads need to be sown in late summer/early autumn, ideally under cloches or in a greenhouse/polytunnel for more reliable harvests. See S3.3 for further details and A35 for crop examples with sowing/harvest months.
How do I increase community involvement in the school garden?	Value the people already involved, eg regularly thank and keep them up to date/ invite suggestions. This will help establish a reliable core group of supporters that can then support other recruitment opportunities, such as plant stalls, local press articles about the garden, school newsletters to parents, etc. Respond promptly to anyone interested in helping, eg with a tour of the growing area. See S2.2 and G2.2 for school case studies with more ideas.



Welcome

This manual supports the food growing aspect of the Food for Life Partnership Mark. It seeks to inspire, educate and give you the confidence to achieve Bronze, Silver and Gold awards by demonstrating gardening skills and suggesting approaches for community inclusion.

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Interview with Head Gardener

How did you start your career?

"I always loved gardening but came to it as a career by accident!

There was a nice man at the job centre who suggested that I go on a one-year organic gardening course. I thought 'why not?' and signed up, after a few days I was hooked! I now have qualifications including organic horticulture and nursery stock production.

This was the start of a fabulous and deeply rewarding career."

What does being Head Gardener involve?

"I work at Ryton Gardens, which is home to Garden Organic's headquarters, and look after its flagship demonstration gardens. I also oversee all the commercial growing on the site including fruit and vegetables.

We have a large garden with more than 20 different areas to maintain and keep looking at their best. As the site is Soil Association certified organic, I ensure their regulations are adhered to. I work 9.00am to 5.00pm, but rarely leave before 5.00pm and work some weekends.

Other aspects of my work include helping with events and planning changes for the gardens."

Who do you work with?

"I have a team of four full-time and three part-time gardeners as well as students and volunteers.

I work with Heads of Department, in particular Education and Marketing, on strategic planning and cross-departmental activities and also give horticultural advice to colleagues and customers."

What keeps you going?

"I find horticulture a deeply rewarding and challenging career; it is such a large subject that you never stop learning and that keeps me interested and stimulated. I love being outdoors no matter what the weather."



My working environment

"My working environment is pretty much as good as it gets; beautiful gardens, plants, wildlife and meeting interesting people and talking about gardening all day."

My tips for anyone learning the trade

"Work hard, learn, and wrap up warm in winter."

My suggestions for skills and qualities needed

"Dedication, commitment, knowledge of plants and ecology, diplomacy, willingness to do what is needed to get a job done, approachable, friendly, helpful, patient (with people and plants) and last, but not least, hard working."