

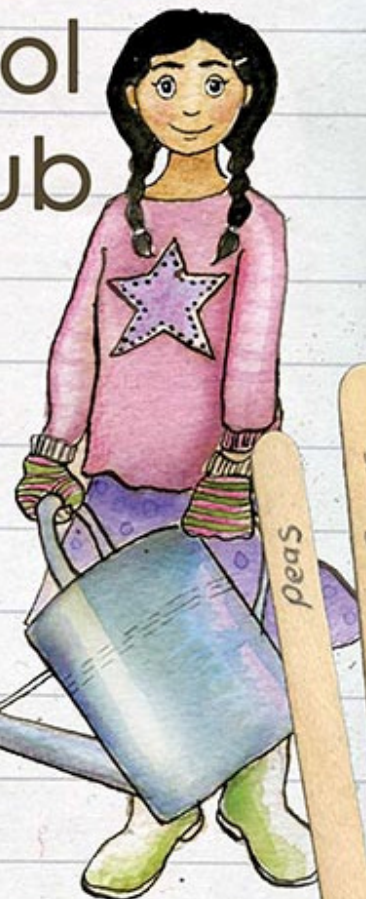


GET GROWING

GET COOKING

## GARDEN LEADER PACK

Everything  
You Need to Know  
to Run a School  
Gardening Club

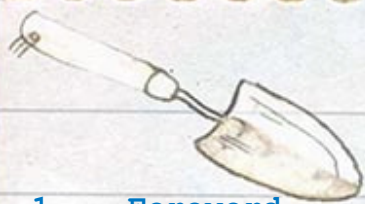


peas  
Runner Beans





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## Foreword



Welcome to the Get Growing, Get Cooking Garden Leader Pack. The Get Growing Project, funded by the Local Food strand of the National Lottery, was created in 2011 to support schools in Stroud District, Gloucestershire, to grow, harvest, eat and sell their own food.

The aim of this pack is to provide everything that a novice garden club leader, be they a teacher or volunteer, will need to run a successful, safe & fun gardening club. However, it is also designed so that the more experienced leader and classroom teacher, as well as parent at home, can come to it for ideas for sessions/lessons/gardening with children. It was also developed to be used in conjunction with our get Growing, Get Cooking Gardening Club Seasonal Calendar poster which provides an overview to the school gardening year and our website which has even more resources.

The pack is not the product of one person alone, but of a team, and I would like to acknowledge the invaluable support and input of colleagues, Julie Wickham, Emily Janke-Pearson and freelance illustrator, Claire Barker.

I hope you enjoy using this pack as much as we did developing and producing it.

Happy Gardening!

*Tamsin*

Tamsin Bent  
Get Growing Project Officer  
December 2013  
[www.stroudvalleysproject.org](http://www.stroudvalleysproject.org)







Raised beds have become very popular recently and you will need to decide whether you go for this option. If you have good soil in your school grounds and a limited budget, then you may wish to plant directly into the ground and just edge each bed. The advantages of raised beds are:-

- They avoid people kneeling on the ground and bending their backs.
- If you get them at the right height, the children find them easier to use.
- They avoid the garden getting trampled.
- Children don't get their clothes as dirty (particularly a consideration for lunchtime clubs).
- Once the bed is established it often involves less digging.
- They help to keep weeds and pests at bay.
- If you are gardening with wheelchair users, they can also reach the raised bed.

In our experience, quite narrow raised beds (approx 1m wide) work better in schools as they allow children to reach into the middle and reduce the need to stand on the bed, so avoiding compacting the soil.

### **Kits and Wood**

There are many kits on the market and when buying the following points may be helpful.

- **Should they be treated?** There was concern in the past regarding using treated wood for raised beds as it was treated with arsenic but these treatments have since been banned.
- **Type of wood** – We mainly use gravel boards or decking timber, but kits come in all types including cedar which is very durable but may be more expensive. Gravel boards are cheaper and more 'rustic' while decking boards are longer lasting but more expensive.
- **Sourcing of timber** - It is worth asking what wood the raised beds are made from and whether it is Forestry Stewardship Council (FSC) certified i.e. from plantations that are sustainably managed and where replanting occurs when trees are chopped down. Wood from B&Q is FSC assured as are those from the Recycleworks ([www.recycleworks.co.uk](http://www.recycleworks.co.uk)).
- **Self watering raised beds** – This option can help cope with the issue of watering over the holidays, with some systems using water from rainwater butts. The rainwater butt needs to be higher than the raised bed and you can also fit timers so that the beds are watered at certain times. (See the separate section on water butts p7).



## How We make Raised Beds

You will need:-

### Tools

Electric drill

Sledge hammer for hammering the posts in

Strong Philips head screw driver/screwdriver bit for electric drill

### Materials

**Gravel boards/decking boards** (15cm deep) cut to preferred length (we usually build 1mx2m beds). For deeper beds you can add two or three layers of timber. We usually opt for a two board depth.

**4 x pointed wooden corner posts** (4cm x 4cm or 2" x 2"). If your raised bed is bigger than 1m x 1m you will need an additional post in the middle of each extra metre.

**Resin coated decking screws** - these are sharp and rust resistant. A box of 100 will be plenty.

### Method

1. Clear the ground you are using by digging it over and removing any weeds. If the ground is full of weeds you may need to put down a weed suppressing membrane over the top of the whole area. This can be purchased from garden centres/builder's merchants/DIY stores by the metre. The stronger, woven fabric is a better long term investment than the flimsier type.



Clearing the ground



Weed suppressing fabric

2. Make the frame of the beds. If you are building the beds more than one board high, build each layer as a separate layer and then put one on top of the other.



Making the frame off site



3. Place the frames in their final position.
4. Hammer in the posts into the ground at the corners of the frame (through the weed suppressing fabric, if using).
5. Drill and screw the frame onto the corner posts at right angles. If your frames are longer, add extra posts every metre.
6. Fill beds with a mixture of topsoil and compost. If cost is an issue, consider looking for topsoil on Freecycle, adverts in local newspapers etc and using compost from any compost bins on the school site. But it is **very** important to ensure that any growing material is free from perennial weed roots e.g. bindweed.



Filling the beds

7. Put bark chippings on the paths around the beds as it will make access easier in wet periods and will keep down any weeds. A more permanent option is to pave the paths.



The finished beds!





Everything natural returns to the earth through decomposition and having a compost heap is a good way of speeding up the process. It is also a great way of getting rid of garden waste and the finished compost can be used as a natural, safe, free fertiliser. For a more comprehensive guide see our composting booklet.

There are many types of compost bins on the market or you can make your own. Normally more than one compost bin is recommended so that the compost can be turned into the next bin each autumn (also another bin for well rotted manure works well). The more the compost is turned, the quicker it will decompose and the process can be speeded up further by using a garden shredder or a compost tumbler. A compost tumbler is a compost bin that spins on a stand, so allowing the compost to be aerated more regularly and easily.

### Choosing the Right Compost Bin

There are so many compost bins and designs on the market it is well worth shopping around to see what is good value and what best suits your needs. Also try contacting your local County Council waste team or look at the [www.getcomposting.com](http://www.getcomposting.com) website.

Features to look for include:

- The compost bin should be easy to use and easy to add material.
- Easy access to the compost at the bottom of the bin as this will be the most rotted.
- It should have no gaps; if you have one made of wood with slats in the side you can insulate it with cardboard or straw.
- Your compost bin should have a lid or a cover.
- Some compost containers have sides that you can raise as the compost heap gets bigger and this is useful when working with children.

### Locating your Compost Bin

You should locate your compost bin in a sunny or semi shaded position. Place the bin directly on the soil so that worms and other useful organisms can get into the compost bin and help to break the material down. Air is essential in allowing your compost to rot.

### The Compost Recipe

When teaching young children about compost and how to make it, it is useful to think of the composter as an animal. The composter needs to be fed the right things, just as an animal would. Too much of one food, or some of the wrong food will all make the compost animal sick.

It is important not to make the mixture too wet or too dry. If it is too wet it will be smelly and soggy. If it is too dry it will not rot as quickly. It is not an exact science but in general, if it is too wet, there is too much green waste and if it is too dry, there is too much brown waste (for examples of green & brown waste see table on the next page). If the mix is too dry, add some water. If it is too wet, add some more, dry, brown material e.g. ripped up cardboard.

Avoid putting too much of one product into the compost. In schools there is a temptation to compost too much of one thing, especially orange peel if the children have oranges for snacks, or paper towels (as there are usually plenty of these around!) If children are involved in putting things into the compost we would recommend that you avoid composting paper towels unless all the children wear gloves when they are putting them into the compost or an adult does it for them. Card board toilet roll inners & egg boxes can also be put in (Consortium of Local Education Authorities for the Provision of Science Services).& HSE (Health & Safety Executive) state that, 'as long as egg boxes and toilet roll centres look clean, there is no reason why they should not be used (by children).'



Below is a list of guidance for what can and can't go into a compost bin.


PUT IN	KEEP OUT
<p><b>Green waste</b></p> <ul style="list-style-type: none"> <li>• Vegetable peelings</li> <li>• Old flowers</li> <li>• Fruit waste</li> <li>• Spent bedding plants</li> <li>• Rhubarb leaves</li> <li>• Tea bags</li> <li>• Plant prunings</li> <li>• Grass cuttings (in moderation and mixed with other things)</li> </ul> <p><b>Brown waste</b></p> <ul style="list-style-type: none"> <li>• Small twigs</li> <li>• Crushed egg shells</li> <li>• Egg and cereal boxes</li> <li>• Corrugated cardboard and paper</li> <li>• Toilet roll and kitchen roll tubes</li> <li>• General garden prunings</li> <li>• Straw and hay</li> <li>• Bedding from vegetarian pets (<b>in moderation</b>)</li> <li>• Ashes from wood, paper, lump wood and charcoal (<b>in moderation</b>)</li> <li>• Sawdust and wood chippings</li> <li>• Wool</li> <li>• Cotton threads</li> </ul>	<ul style="list-style-type: none"> <li>• Cooked food</li> <li>• Cooked meat</li> <li>• Dairy products</li> <li>• Diseased plants</li> <li>• Dog or cat faeces</li> <li>• Disposable nappies or their contents (these attract unwanted pests and can cause odour)</li> <li>• Perennial or invasive weeds such as dandelions or thistles (as these will grow again in the compost when added to the garden)</li> </ul> <p>Plastics } Glass } Metals }</p> <p>⇒ These should be recycled, where possible</p>

The amount of time you leave the compost will depend on how much it has been aerated. The more the compost is turned, the faster it will rot. Turning the compost and starting a new heap is a good autumn gardening club task! Once the compost is ready, it should be dark brown, smell earthy and have a crumbly texture (if the top layers are not well-rotted, it can be added to the bottom of the new compost). Then the rotted compost can be sieved and put it into bags or it can be used it as it is and dug in well to the beds.



## How to Install a Water Butt

A water butt is an essential piece of equipment for the garden and avoids using mains water. If there isn't a water supply near your school garden, try installing a water butt onto the downpipe on a nearby shed/building. The following is taken from the B&Q guide to installing a water butt.

<b>You will need:-</b>	
<p><b>Tools</b></p> <p>A hacksaw            Power drill fitted with a hole saw the same diameter as the water butt connector pipe.            Tape measure            Pencil            A spirit level</p>	<p><b>Materials</b></p> <p>A rainwater butt and stand            A rainwater connection kit            A rainwater diverter kit</p>
<ol style="list-style-type: none"> <li>1. Choose a suitable down pipe for the water butt and place the stand beneath it. It needs to be on level ground to avoid leaning or sinking and raised high enough off the ground to enable your watering can to fit underneath. Check that the stand is level with a spirit level - the bubble should sit between the two lines on the level.</li> <li>2. Place the water butt on the stand and mark its height on the downpipe. Cut the downpipe 3cm below this point with a hacksaw. Cut it slowly and gently so that it doesn't go 'wonky' and you keep a straight cut across the down pipe</li> <li>3. Attach the rain diverter fitting to the downpipe (the cut section of the downpipe fits onto the bottom of the diverter).</li> <li>4. Measure 8cm down from the top of the water butt and drill a hole through which the water butt connector is fitted. You will need to ensure that the hole sawn is the same diameter as the fitting. It is better to use a hole saw bit that is too small than too big, as you can always make the hole larger!</li> <li>5. Attach the water butt connector to the water butt by pushing through the drilled hole and screwing the fittings into place.</li> <li>6. Attach the water butt connector to the rainwater diverter with the supplied fitting. Place the lid on the water butt and lock it into place.</li> </ol> <p><b>Safety Notes</b></p> <ul style="list-style-type: none"> <li>• It is important to have a childproof lid so that children cannot open it and to ensure that animals can't get in and drown.</li> <li>• Rainwater stored in a water butt is suitable for garden use but not for paddling pools, water tools or for drinking. Consider putting a pictorial sign on the water butt to show this. The children might like to design and colour one which you can then laminate. This is a good a good wet weather activity for the gardening club and teaches the children not to drink the water at the same time.</li> </ul> <div style="text-align: center;">  </div>	

<http://www.waterwise.org.uk/images/site/Documents/water%20butt%20-.pdf>

<http://www.greenhousesensation.co.uk/product-range/irrigation-and-water-butts/auto-click-and-drip.html>

The above website has details of a timed water butt system.





## Polytunnels and Greenhouses

### Why use a greenhouse or a polytunnel in the first place?

- Both extend the growing season but greenhouses may need to be heated in winter.
- They will protect crops from adverse weather conditions.
- Less hardy, more exotic plants can be grown.
- Four or five crops can be grown at once and conditions can be tailored to the crop.
- Productivity is greatly increased and seed germination is usually higher.
- They allow the sun in and prevent the heat from escaping.
- They provide cover for the children in bad weather.

### GREENHOUSE

#### Pros

- A greenhouse looks good and lasts a long time.
- It is more easily ventilated than a polytunnel
- A water butt can be installed to collect rain water.

#### Cons

- The site needs to be level. It can have a concrete base or it can be placed on the ground and sunk into various points around the growing area.
- Safety glass is necessary when working with children and this can be more expensive.
- The soil will need to be replaced periodically to prevent diseases building up.

### POLYTUNNEL

A polytunnel is constructed from a metal framed semi-circular tunnel covered in hard wearing polythene with Ultra Violet light inhibitors to maximise its lifetime. Over 90% of light is transmitted through the polythene, and the light is diffused which prevents plants from shading one another. They are used extensively in the fruit growing industry and their use has enabled British soft fruit to be successfully grown from May to mid/late autumn, dramatically reducing the amount of soft fruit imported into the UK.

#### Pros

- A polytunnel is less expensive and the larger tunnel, the more economical it becomes.
- It is cheaper than a greenhouse in the short term but the covers will need replacing every 5 years and these cost 15-20% of the original tunnel price.
- It will tolerate a sloping site.
- They can be relocated when new soil is needed rather than allowing disease to build up.
- The air stays warmer much longer and temperatures fluctuate less than in a greenhouse.

#### Cons

- A polytunnel has a short life span and is more prone to damage.
- It is less straightforward to collect water from than a greenhouse (but not impossible).
- It is harder to ventilate and this means that plants may be more prone to fungal infections.  
([www.firsttunnels.co.uk/faqs](http://www.firsttunnels.co.uk/faqs) & [www.liveforgardening.com](http://www.liveforgardening.com) )

### Which is Easier to Build?

- 60% of people choosing a greenhouse will opt to have it installed whereas 95% of people choosing a polytunnel will build it themselves ([www.liveforgardening.com](http://www.liveforgardening.com).)
- A 6ft x 20ft polytunnel can be constructed in a day by knowledgeable constructors but it would be prudent to pencil in two days for a first time constructor ([www.firsttunnels.co.uk/faqs](http://www.firsttunnels.co.uk/faqs) )

### Cost

For a new 8ft x 10ft (2.4m x 3m) structure, prices start from £690 for a greenhouse and £380 for a polytunnel and can go up to £3,000 for a 12ft x 18ft greenhouse or £600 for a polytunnel ([www.liveforgardening.com](http://www.liveforgardening.com).) Look into grants that may help with the cost e.g. Awards for All [www.biglotteryfund.org.uk/funding/Awards-For-All](http://www.biglotteryfund.org.uk/funding/Awards-For-All).





If you are not a member of school staff, running a gardening club for the first time can be quite a daunting prospect! So here are some tips from experienced garden club leaders that hopefully will help with the smooth running of the club.

1. Try to plan in advance what you are going to do and how you are going to do it. If you have access to a white/chalk board it is helpful for you and the children if you put up what you're doing in the session.
2. Try and learn the children's names as quickly as possible and fill in a register so that you feel in charge.
3. Try to ensure that you have activities that all the children can do, and some spare things for if they finish early.
4. Try to involve the children in getting everything out, putting it away and tidying it up. This is a useful part of them learning how to be responsible for a garden.
5. Wait for the children to stop talking before you start talking.
6. Establish firm boundaries from the beginning of what is and isn't acceptable. You don't have to spend ages doing this. Establish a few essential rules such as 'no talking while I'm talking' and behaving safely with the garden tools and then mention the others as they come up.
7. Remember it is a club, you are a volunteer, and only well-behaved children can attend. You are not obliged to work with children who aren't behaving to your expectations (although you have to keep them until they are collected) but if they haven't behaved well, have a chat with the child concerned and tell them they are welcome to attend if they behave. Have a member of staff who you can go to if there is a problem.
8. Praise the behaviour you do want. This helps to create a positive working environment.
9. When giving an instruction, start the sentence off by saying 'When I have finished speaking...' followed by the instruction.
10. Most teachers employ some sort of cue that tells children to stop and listen without shouting at them. Some tip a rain stick upside down, some clap, some put their finger on their lips or their hand in the air. Tell the children what the cue is, carry out the action and then wait for the children. Mention the ones who have noticed.
11. Turn work into a game e.g. 'I wonder who can pick the most weeds?' or 'I wonder which group can clear up the fastest?'
12. At the end of the session try to spend a few moments thinking about what went well and what didn't. Plan what you would do differently next time. Try not to lose heart if a session doesn't go as well as planned!

## Behavioural Guidelines

A great way to start the first meeting of the club is to discuss with the children what is and isn't acceptable behaviour in the garden. They will come up with good ideas but here are some you might like to raise as a starting point.

- The children need to be sensible with the tools so as not to hurt themselves or others – demonstrate how you would like them used and stored. They need to allow enough room between each other to work safely.
- They mustn't eat anything unless you have told them it is safe (see Potential Wildlife hazards section p 59) and not put their hands in their mouths and/or eyes etc until washed.
- They need to walk in the garden.
- They should wear gloves where possible and always wash hands at the end of the session.



## Conducting a Risk Assessment



It is very important when working with children in schools that the level of risk is assessed, especially if you are a volunteer and the activity is carried out after school. It is likely that the school will have its own risk assessments and if so, please ask to see a copy. The following information is taken from Five Steps to Risk Assessment by the Health and Safety Executive (HSE) [www.hse.gov.uk/pubns/indg163.pdf](http://www.hse.gov.uk/pubns/indg163.pdf).

### What is a Risk Assessment?

A risk assessment is simply a careful examination of what in your work could cause harm to other people – in this case, children in your care and other adult helpers. The risk assessment allows you to weigh up whether you have done everything in your power to reduce the risks (the chance, high or low, that somebody could be harmed by these and other hazards, together with an indication of how serious the harm could be) or whether you should take more precautions to prevent harm.

Your school should have someone whose job it is to look at health and safety so ask them for help.

### The Five Steps

#### Step 1 - Identify the Hazards (anything that may cause harm)

- Walk around the gardening patch and look what could reasonably be expected to cause harm.
- Ask the children and other adults what they think and involve them in the risk assessment. They may have noticed things that you haven't.
- Visit the HSE website ([www.hse.gov.uk](http://www.hse.gov.uk)). This has practical guidance on what the hazards are and how to control them
- Look back at the accident book for the school. This will provide you with historical information on what has happened in the past and will guide you in looking for potential hazards.

#### Step 2 - Decide who might be harmed and how

This will mainly be the children and the other adults involved in the gardening club but check whether there are other site users around at the same time.

#### Step 3 - Evaluate the risks and decide on precautions

Having spotted the hazards, you then have to decide what to do about them. The law requires you to do everything 'reasonably practicable' to protect people from harm. Ask yourself, can I get rid of this risk altogether? If not, how can I control this risk so that harm is unlikely?

#### Step 4 - Record your findings and implement them

Share your findings with the Head Teacher and the staff at the school and see if you have missed anything. You must be able to show that:

- a proper check was made
- you asked who might be affected
- you dealt with significant hazards, taking into account the number of people who could be involved
- the precautions are reasonable, and the remaining risk is low
- you have involved the Head and the other teachers.

#### Step 5 - Review your assessment and update if necessary

With schools it is probably a good idea to update your risk assessment each term. It is likely that you won't need to alter it too much once you have done it, but the hazards may alter with the seasons.





## Specific Risks Associated with Gardening



### Poisonous Plants

If you come across poisonous or hazardous plants on site, show them to the children, so that they will recognise them again, before removing and disposing of them safely. Ensure that you talk to the children often about not eating anything unless they are sure what it is and that it is safe (see potential Wildlife Hazards section p 59).

### Tools

#### Flower Pots

Statistically these are the second most dangerous tool in the garden, causing 5,300 accidents, with falls, cuts and lifting injuries some of the most common types of accident recorded!

([www.bbc.co.uk/gardening/basics/techniques/safety\\_prevent\\_accidents](http://www.bbc.co.uk/gardening/basics/techniques/safety_prevent_accidents))

#### Spades, Forks, Rakes, Hoes, Hand Tools

- When carrying forks or rake, children should carry the tool horizontally at the point of balance with the dangerous prongs pointing backwards. This gives the children a greater degree of control over the spade or fork and ensures they can see the dangerous bit and move it out of the way if someone is coming towards them.
- Spades, forks and rakes should be left flat on the ground between uses with the prongs pointing downwards. Many accidents occur by people stepping on rakes where the prongs are pointing upwards and however comic this might be, it can cause injuries, even concussion!

### Protective Clothing and Sun Safety

- Ensure that the children have gardening gloves if they need them and are wearing closed toe shoes.
- They shouldn't use hands for shovelling soil as there could be broken glass and tree roots in amongst the soil.
- Allow the children to use old cushions/curtains for kneeling on when they are digging in the garden. In hot weather ensure that the children;
- wear sun hats.
- have water to drink.
- Are wearing sunscreen.

### Ideas for Tool Safety Talk

1. Carry tools at the point of balance.
2. Use the heel or ball of the foot when digging to avoid damaging the arch of the foot.
3. Press down with the foot, don't kick the spade or fork.
4. Ensure the handle of each tool is secure.
5. When not using tools lay them flat down on the ground, out of the way of the walkways and with prongs or blades facing downwards.
6. Hang tools up in the potting shed if possible or fill a barrel with some sand mixed with a small amount of engine oil and place the tools in this, blade facing down.
7. Ensure that you lock knives, edging tools and secateurs away when they are not being used.

### Ideas to Make Safety Talks More Interesting

Repeating the same thing about tools each week to the children may cause them switch off, so here are some ideas to make it more fun!

- Make yourself a list of all the things you want to say about tool safety and laminate it. Then get the children to take it in turns to give the tool safety talk.
- As the children get accustomed to the tool safety talk, get one to give the talk without any help and get another child to tick off each point as they mention it and give them a score for how many points they remembered.



## Possible Grants Available for Community Gardens



**B & Q** operate a waste donation scheme where they will donate waste materials such as tins of paint, timber, and end of lines to local schools. There are branches in Stroud, Gloucester and Cheltenham.

**The Co-operative Membership Community Fund** will donate £100-£2,000. It has to benefit the community and be in line with cooperative principles. A school cannot apply but a PTA can. For more details go to [www.co-operative.coop/membership/local-communities/community-fund/funding-selection-criteria/](http://www.co-operative.coop/membership/local-communities/community-fund/funding-selection-criteria/)

Some **Parish Councils** give grants to the community. Contact your Parish Council to ask. If they don't give grants themselves they may keep a list of other small local funding pots which may be available to schools.

**Awards for All** is funded by the National Lottery. It has to be a community project and community involvement has to be demonstrated. Up to £10,000 is available. [www.biglotteryfund.org.uk/funding/Awards-For-All](http://www.biglotteryfund.org.uk/funding/Awards-For-All)

**Gloucestershire County Council Funding Bulletin** is available at [www.gloucestershire.gov.uk/externalfunding](http://www.gloucestershire.gov.uk/externalfunding)

### **Innovation in Ecological Education**

This grant is for innovation in ecological education. Although it does not directly fund community or school gardens it may fund innovative ecological work. The aim of this programme is to promote good practice and to support ecology teaching that is both exciting and intellectually stimulating. Funding is available to encourage teachers to develop innovative ways of teaching ecology and/or undertake research to evaluate methods of teaching ecology. Level of Funding: Up to £1,500. There are two deadlines per year; 15 March & 15 September.

Further information [www.britishecologicalsociety.org/grants/education/iee.php](http://www.britishecologicalsociety.org/grants/education/iee.php)







## Check List for Schools supporting the Garden Club Leader



When working with a parent/volunteer who is not an existing member of staff, it is important that they have as much knowledge as possible to aid the smooth running of the club. Or if you are a volunteer running the club for the first time, it is helpful to get as much advance information from the school. Below is a checklist of some useful questions.

- Is the leader CRB checked?
- Is there a member of school staff as the main point of contact?
- Does the leader know the fire procedures?
- Is the leader first aid trained?
- Do they know what their first aid responsibilities are?
- Do they know where the first aid box is?
- Are they aware of any medical conditions/behavioural issues regarding the children in the club?
- Do they have an allocated room if the weather is too bad to go outside?
- Do they know the location of the toilets that they can use?
- Do they know where the children's toilets are?
- Is there access to the garden/ tool shed or access to keys if they are locked?
- Do they know where to leave muddy wellies, clothing etc?
- Is there access to brooms, dust pan & brushes?
- Is there a procedure for collecting children at the beginning & end of the session?



## Session Plan



Term	Autumn	Date	From September	Week No	Ongoing
Subject	<b>Autumn Harvesting</b>				
Objectives	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. See a variety of different fruit &amp; vegetables</li> <li>2. Check if fruit or vegetables are ready to be picked</li> <li>3. Experience the different ways of harvesting</li> </ol>				
TIME	CONTENT	DETAILS	RESOURCES		
0.00	Arrive, register, get changed, brief introduction to session	Going to pick/harvest fruit & vegetables that planted last term			
0.10	Brief introduction to activities	<ol style="list-style-type: none"> <li>1. Harvest autumn fruiting raspberries. Can send home in paper cups, save for cooking, preserve as jam (microwave or boiling) or freeze (see recipes section &amp; Freezing fruit &amp; vegetables session plan).</li> <li>2. Cut cabbages if their heads are big enough. They will need to be harvested before the first frost.</li> <li>3. Sweet Corn – It's ready to pick when the silky tassels at the top turn brown. You can check further by peeking inside the leaves to see if the kernels are a buttery yellow. To harvest, snap off the cobs by twisting their base. They need to be eaten quickly, before their sweetness fades.</li> <li>4. Potatoes – Cut off foliage just above the ground, leaving the potatoes in the ground for another 2 weeks. Then lift them with a fork and leave them out for a couple of hours in the sun to dry. Store them in paper bags in cool dark place. If the children are taking them home, the potatoes can washed and put into smaller paper bags.</li> <li>5. Tomatoes – Outside tomatoes need to be either harvested or brought under shelter if they are in pots. If a ripening truss is picked, it can be placed on a sunny windowsill to ripen. Placing a ripe banana nearby may help with the ripening process as they give off a gas, ethylene*, also known as the 'death' or 'ripening hormone'.</li> </ol>	Paper cups  Basket/Trug  Garden Forks, bowls & water, paper bags		
0.20	Children have a go				
0.50	Tidy up, wash hands, change				
1.00	Leave				
Notes	<p>*As is often the case, the role of ethylene and its effects on produce was discovered by accident. Lemon growers would store newly harvested green lemons in sheds kept warm by kerosene heaters until they were ripe enough to sell. When new, modern heating systems were tried, the lemons no longer turned yellow on time. Research soon found that the important factor in the ripening process was small amounts of ethylene gas given off by the burning kerosene in the heaters (<a href="http://www.ethylenegas.com">www.ethylenegas.com</a>) <b>Tomatoes should never be put in the fridge</b> They'll last a week or eight days on the worktop after ripening, but shouldn't really be kept longer than that. The tart taste of tomatoes is due to a chemical called Linolenic Acid converting to Z-3-Hexenal, and this reaction is disrupted by cold, so keep them at room temperature (<a href="http://www.Raw-Food-Health.net">www.Raw-Food-Health.net</a>).</p>				





# Session Plan



<b>Term</b>	Autumn	<b>Date</b>	September	<b>Week No</b>	1
<b>Subject</b>	<b>Autumn/Winter Tidy Up 1 – OUTSIDE</b> - Could easily run over two sessions				
<b>Objectives</b>	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Understand why we need to tidy up</li> <li>2. Use &amp; care for tools</li> </ol>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>			<b>RESOURCES</b>
0.00	Arrive, register, get changed, brief introduction to session	It is important to tidy up gardens to make them safe places for people & also to make sure that pests & diseases aren't harboured in the waste, ready to infect crops in the spring. However, it is also important that they aren't too tidy so that there are still places for wildlife.			
0.10	Brief introduction to activities	<ol style="list-style-type: none"> <li>1. Weeding</li> <li>2. Clear away any weeds, finished crops etc.</li> <li>3. Round up any pots, labels, bits of string put away neatly</li> <li>4. Litter collection</li> <li>5. Canes – Clear away dead plants from canes, wipe down with disinfectant#, tie in bundles &amp; store under cover.</li> <li>6. Raking up fallen leaves – Collect leaves and make leaf mould.*</li> </ol>			Gloves, bags, buckets, twine/ties, disinfectant, rakes, leaf bags, brushes, black bin bags/leaf sacks
0.20	Children have a go				
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	<p>* It's best to keep leaves out of normal compost heaps as they take longer to decompose. So once they are collected, you can put them either in black bin bags (with holes) or biodegradable leaf sacks (can be bought from Stroud Valleys Project Eco Shop, 8 Threadneedle Street, Stroud). Leave the sacks somewhere out of the way and in a couple of years you'll have leaf mould, which you can put around plants as a mulch, particularly good for crops like raspberries.</p> <p># For home-made disinfectant recipe see page 17.</p>				



# Session Plan



<b>Term</b>	Autumn/Winter	<b>Date</b>	Any time	<b>Week No</b>	
<b>Subject</b>	<b>Autumn/Winter Tidy Up 2</b> – Can be <b>INSIDE</b> - Could easily run over two sessions				
<b>Objectives</b>	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Understand why we need to tidy up</li> <li>2. Use &amp; care for tools/equipment</li> </ol>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>			<b>RESOURCES</b>
0.00	Arrive, register, get changed, brief introduction to session	It is important to tidy up gardens to make them safe places for people & also to make sure that pests & diseases aren't harboured in the waste ready to infect crops in the spring. However, it is also important that they aren't too tidy so that there are still places for wildlife.			
0.10	Brief introduction to activities	<ol style="list-style-type: none"> <li>1. Sort out gloves – Gloves may need soil knocking off and get sorted into pairs &amp; attached to each other with pegs. Children may like to decorate pegs with felt tips pens.</li> <li>2. Clean tools – Digging tools - knock off any loose soil and wash with soapy water. Clean secateurs with wire wool to remove any sticky residues, spray with disinfectant*.</li> <li>3. Organise Seed Packets – Check and throw away/recycle any empty packets. Make a seed organiser. See page 17.</li> </ol>			Laundry pegs, bowls of soapy water, wire wool, disinfectant spray  Gloves for using with wire wool  See page 17
0.20	Children have a go				
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	*Disinfectant is used to prevent any diseases being carried over to the next growing season. Garden Centres sell specific disinfectant for this purpose. Or you can make your own either at the gardening club (good for a wet weather session) or at home before. For disinfectant recipe and instructions for making Seed Organiser see page 17.				



## Recipe for Disinfectant Spray



### Things you will need:

White vinegar (can be bought from Stroud Valleys Project Eco Shop, 8 Threadneedle Street, Stroud)  
Water  
Washing-up liquid  
Tea tree oil  
Plastic pump spray bottle

1. In a plastic pump spray bottle, add 1/4 cup white vinegar. Vinegar is a disinfectant and it shines up surfaces really well without leaving behind any build-up.
2. Squirt one teaspoon of plain washing up liquid into the spray bottle. The dish washing liquid should be just a plain soapy liquid, not one with added bleach or bleach alternative. The cheapest, scent free variety is best. Dish washing liquid is a good cleaning agent, and the soapy film will be kept to a minimum with the vinegar addition.
3. Add about 20 drops of tea tree oil to the mixture. This oil will have quite a strong smell, but tea tree oil is a very effective disinfectant. Shake to mix well. Finally fill the bottle with water. That's it!
4. You can use this all natural disinfectant cleaner on your work tops, microwave, floors, in your bathroom or wherever you would use a disinfectant cleaner.

Read more: [www.ehow.com/how\\_4758237\\_own-green-disinfectant-cleaner.html#ixzz1UWxgrVWE](http://www.ehow.com/how_4758237_own-green-disinfectant-cleaner.html#ixzz1UWxgrVWE)

## Instructions for Making a Seed Organiser



### Things you will need

2 -3 Cardboard boxes (shoe boxes are ideal, number depends on how many seeds you have)

Extra cardboard for dividers

Pens, Sticky tape,

Old vegetable seed catalogues

Scissors

Glue

1. Cut out dividers that will fit comfortably into the box but are 2cms higher (should all be the same size for each box, you may wish to cut out a template for the children depending on their age & ability). How many letters of the alphabet you have in each box is up to you depending on number of seeds you have and the size of the boxes. We opted for 5 per box.
2. The dividers should be marked with letters either hand written or printed, with the first letter on the left hand corner, the letter on the next divider a little further right and so on.
3. Each divider can then be decorated using photos of fruit & vegetables cut out from the seed catalogues. For example, pictures of Beetroot, basil, on the B divider. This is a good way of children familiarizing themselves with different types of fruit and vegetables while also using literacy skills.





# Session Plan



<b>Term</b>	Autumn	<b>Date</b>	September onwards	<b>Week No</b>	
<b>Subject</b>	<b>Collecting Seeds</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ul style="list-style-type: none"> <li>• Understand that by letting crops flower you can get more seeds</li> <li>• Seeds need to be dried otherwise they will go mouldy</li> </ul>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>		<b>RESOURCES</b>	
0.00	Arrive, register, get changed, brief introduction to session	If left, many vegetables will go to seed and by collecting them you can save money & time, especially if you can share them with friends! In order to get the plants to flower and then produce seed they need to be left in the ground (this can be a problem if you are short of space.) Also you cannot collect seed from F1 Hybrids (look on the packet if you are not sure) because their seed will not produce the same plant again. It is also best to collect seed from plants that are growing a little distance away from other varieties of the same plant, otherwise you will end up with a cross (hybrid) between the two. It makes the most sense to collect seeds from those plants that are the most expensive to buy or from crops you hope to grow lots of next year.			
0.10	Brief introduction to activity, then Children have a go	<ol style="list-style-type: none"> <li>1. Once the plant has flowered you can collect the seed. Below are just a few tips on the different types but it obviously depends on what you have in your garden!</li> <li>2. <b>Dry seeds</b> e.g. salad veg, rocket, herbs (such as dill, fennel, caraway.) If the seeds grow in pods e.g. rocket, wait for the pods to go brown but collect before they drop. Empty the seeds out and dry before storing. If the seeds aren't in pods, cut off the flower heads and put them upside down in paper bags. Scrunch up the tops and give the bags a shake. The seeds should come out into the bags!</li> <li>3. Seeds from <b>wet fruit</b> e.g. tomatoes, squash, cucumber, courgette. Let the seed ripen in the fruit then pick it, cut it open and remove the seeds. Spread them out onto kitchen paper to dry, then store.</li> <li>4. Seeds from <b>Pods</b> e.g. beans &amp; peas. Leave the last few pods on the plant to dry thoroughly. If they are still wet, pick the pods and spread them out to dry indoors. When they are dry, empty out the seeds.</li> <li>5. Put the dried (<b>important they are completely dry, otherwise they may go mouldy</b>) seeds in to labelled packets, then into the Seed Organiser (see notes.)</li> </ol>		Baskets Envelopes Paper Bags Scissors Cutting knives suitable for children Chopping Boards Kitchen Towel <b>For resources for seed organiser see page 17 &amp; seed packets see page 19</b>	
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	For Instructions for making a Seed Organiser see page 17.				



## Making Seed Packets



### Things you will need

An assortment of small envelopes

Paper (can be scrap)

Pens, Marker pens Sticky tape

Old vegetable seed catalogues

Scissors

Glue

Washed plastic milk bottles –clear or white

1. To make your own packets. Cut an A4 piece of paper in half. Fold the two short sides of the paper to the middle and overlap slightly. Seal with tape. Fold up the bottom and tape again. Fold over the top, once the seeds and/or labels are inside. Then can be sealed with a strip of masking tape to allow resealing.
2. Decorate the envelopes with drawn pictures or pictures cut out from seed catalogues. The labels can be hand written or printed if you have access to computers. To make seed labels, cut out thin, rectangular strips from the milk bottles and write down the name of the seeds, pop them inside the envelope ready to be used.



## Session Plan



Term	Summer/Autumn	Date	From June onwards	Week No	Ongoing
Subject	<b>Preservation - Drying Fruit &amp; Vegetables</b>				
Objectives	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Understand that fruit &amp; vegetables will become rotten if left</li> <li>2. Understand that it needs to be preserved in some way if it is to last longer</li> <li>3. Drying is one method of preserving food.</li> </ol>				
TIME	CONTENT	DETAILS	RESOURCES		
0.00	Arrive, register, get changed, brief introduction to session	Once fruit and vegetables are picked, unless they are eaten quickly, they will begin to go bad, so they need to be eaten while fresh or be <b>preserved</b> . Preserving is when food is treated to prevent decay and then it can be kept for future use. For example, you may have too many strawberries at once to eat in May and then none in the winter. But if you make the strawberries into jam you can eat them all year. <b>Drying</b> is one of the oldest ways to preserve food. People in warm, dry climates have found it easy to preserve their foods simply by spacing their produce out and letting the air take the moisture out of the food. Drying works by taking the water from the food so depriving micro-organisms of the moisture they need to survive and stopping them from spoiling the food. Properly dried fruits and vegetables will have 80-90 percent of their water removed. Because drying does not violently heat food, it does not destroy as many of the nutrients as canning or cooking. Dried foods can be reconstituted by adding water or often simply eaten dry. Common dried foods we eat every day include raisins, plums and beef jerky. Dehydration (drawing out water) is used to make packaged soups, coffee, tea and most spices.			
0.10	Wash hands, brief introduction to activities	<p>The amount of moisture in the food effects how it is dried. If it has a high water content e.g. apples, it needs to be oven dried. If it has a low water content e.g. chillies, it can be air dried, which is much simpler.</p> <p><b>Oven Drying</b></p> <ol style="list-style-type: none"> <li>1. Pick your ripe fruit</li> <li>2. Remove any damaged ones, leaves etc and wash.</li> <li>3. Leave berries whole. De-stone and halve plums &amp; halve tomatoes. Slice apples &amp; strawberries. Apples also need to be de-cored and dipped in lemon juice to prevent them going brown (pat dry with tea towel).</li> <li>4. Place on a wire rack (best) or an oiled baking tray, evenly spaced without them touching.</li> <li>5. Place in oven at lowest temperature, occasionally open the door to lower the heat.</li> <li>6. Cook for several hours til it feels light &amp; dry to the touch.</li> <li>7. Allow to <b>completely</b> cool.</li> <li>8. Put into airtight jars. Seal &amp; store in cool, dark area for up to 4 weeks</li> </ol> <p><b>Air Drying</b></p> <p>This is well suited to chillies, herbs &amp; de-podded beans</p> <p><b>Chillies</b> – Place on a wire rack in a cool, dry, airy place (not the kitchen as too damp due to steam) for a few weeks. Or wearing gloves (keep hands well away from eyes) thread the chillies onto string and hang somewhere cool &amp; dry.</p> <p><b>Woody Herbs</b> - e.g. –Rosemary, sage, bay &amp; marjoram. Make into bunches &amp; hang somewhere cool &amp; dry</p>	<p>Baskets or trugs Bowls of water Chopping boards Knives suitable for children (I have used normal table knives with a slightly serrated edge. They cut most veg except onions.) Apple corer Wire racks/Baking trays Oven Tea towels Air-tight jars</p> <p>String Needles (with blunt end if possible e.g. embroidery needles) Gloves (for chillies)</p>		
0.20	Children have a go				
0.50	Tidy up, wash hands, change, Leave				





# Session Plan



<b>Term</b>	Autumn	<b>Date</b>	September	<b>Week No</b>	1
<b>Subject</b>	<b>First Ever Introductory Session</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Be familiar with a variety of fruit &amp; vegetables</li> <li>2. Know more about the other children in the group</li> <li>3. Be familiar with the how the club is run</li> </ol>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>			<b>RESOURCES</b>
0.00	Arrive, register, brief introduction to session	Who am I...A brief introduction to leader. Who are you? – Alphabet Memory Game – Each child comes up with a fruit or vegetable that begins with the same letter as their name (eg Amy Apple.) If children need help coming up with fruit/veg look through seed catalogues/books for ideas. First child says their name, next child says first child's name then adds theirs, then next says first two then adds their own until the last person (good if it is garden club leader) has to remember them all!			Seed catalogues, books
0.10	Brief introduction to activities	<ul style="list-style-type: none"> <li>• Make name necklaces (leader keeps, collects at end of each session, hands back at beginning of sessions until familiar with names.) Don't wear when outside (strangling hazard)</li> <li>• Get Growing Gardening Bingo (see pages 22 &amp; 23).</li> <li>• Get Growing Gardening Survey (see attached sheet)</li> <li>• Vegetable Sequencing Cards (see page 22).</li> </ul>			Cardboard rectangles (label sized, with hole punched) String/wool, pens, pencils
0.50	Tidy up, discuss next week	Recap of session - Collect in name necklaces then have a quiz to see how many names garden club leader can remember! Say what they'll need to bring with them next week e.g. wellies, waterproofs, old trousers. Tell children what you will be doing next week.			
1.00	Leave				
<b>Notes</b>	Get Growing Gardening Bingo, Gardening Survey & Vegetable Sequencing Quiz are all designed to be good fun for the children but should also allow the garden club leader to see how much the children know about gardening and also allow the garden leader to see how much the children's knowledge progresses throughout the year.				



### Things You Will Need:

Gardening Bingo Sheets (see page 23 – you can put in any questions you like, we have just put in a sample selection)

Pencils, Clipboards (if no access to tables)

1. This is an ice - breaking activity and good in larger schools where the children might not be as familiar with each other. But regardless, it's a good way of finding out what the children know. Be prepared for it to be quite lively!
2. Each child has a bingo sheet & pencil, they then have to go around the rest of the group asking them the bingo questions, every time they get a yes to the question they write the person's name in the appropriate box (the same person can only be written in up to two different boxes.)
3. The first person who fills all the boxes says 'House' and is the winner!
4. Then discuss who's in the boxes. You can keep the sheets and play it again at the end of the year and see if anything has changed.




## Vegetable Sequencing Cards

### Things You Will Need

Vegetable sequencing cards (cut out & also laminated if you intend to re-use them.)

1. Divide the children into groups of up to 4. Give each group 2 – 3 different vegetable groups (pictures from seed, seedling, plant harvested vegetables, to cooked vegetables). In some of the cooked vegetable groups there are two options, a straight photo of the cooked vegetable or a trickier one of the vegetable incorporated into something else e.g a cake, it's up to the leader which one to use, it depends on the age & ability of the children. Muddle up the cards.
2. The children then have to get each vegetable in the right order from seed up to cooked vegetable. It can be quite difficult, particularly for younger children, so they may need to be with older children or more experienced gardeners. They get two points for each card (one point for getting the picture in the correct vegetable group and one point for getting it in the right place in the sequence!) You can then give them a score.
3. You can repeat the game at the end of the year seeing how they did and compare their scores. It's a good way of measuring any progress they may have made.

 Gardening Bingo 

<p>Find someone who has eaten broad beans. Write their name below</p>	<p>Find someone who has made compost. Write their name below</p>	<p>Find someone who likes to eat peas. Write their name below</p> 
<p>Find someone who likes to eat carrots. Write their name below</p> 	<p>Find someone who likes to eat potatoes. Write their name below</p>	<p>Find someone who has planted seeds. Write their name below</p>
<p>Find someone who eats garlic. Write their name below</p>	<p>Find someone who likes digging. Write their name below</p> 	<p>Find someone who has grown tomatoes. Write their name below</p>



<b>Term</b>	Summer/Autumn	<b>Date</b>	From June onwards	<b>Week No</b>	Ongoing
<b>Subject</b>	<b>Freezing Fruit &amp; Vegetables</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Understand that fruit &amp; vegetables will become rotten if left</li> <li>2. Understand that it needs to be preserved in some way if it is to last longer</li> <li>3. Freezing is one method of preserving food.</li> </ol>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>			<b>RESOURCES</b>
0.00	Arrive, register, get changed, brief introduction to session	Once fruit and vegetables are picked, unless they are eaten quickly, they will begin to go bad, so they need to be eaten while fresh or be <b>preserved</b> . Preserving is when food is treated to prevent decay and then it can be kept for future use. For example, you may have too many strawberries at once to eat in May and then none in the winter. But if you make the strawberries into jam you can eat them all year. Freezing is one way to preserve food. It works by stopping most of the chemical and biological processes that slowly break down a vegetable once it is picked (www.preservefood.com.) Nearly any food, raw and cooked, can be frozen with a few exceptions such as lettuce and raw potatoes. Some require special preparation including cooking or blanching (a very short, sharp boil which destroys natural enzymes that can spoil flavour, colour & texture) and it is always best to use clean fresh produce.			
0.10	Brief introduction to activities, wash hands	<p><b>Freezing Soft Fruit e.g. Strawberries, Raspberries, Blueberries</b></p> <p><b>Tray Freezing</b></p> <ol style="list-style-type: none"> <li>1. Pick your ripe fruit</li> <li>2. Remove any damaged ones, leaves etc and wash</li> <li>3. Place the individual berries on a baking tray/s</li> <li>4. Put the trays in a freezer</li> <li>5. Label freezer bags with name of fruit &amp; date</li> <li>6. At next session spoon the fruit into the labelled freezer bags and return to the freezer. They should keep up to 6 months.</li> </ol> <p><b>Freezing Vegetables*</b></p> <p>There are 2 general methods, Raw freezing &amp; Blanching. If the food, such as French beans, is to be eaten within 3 months, tray freezing can be suitable, see above. Otherwise try blanching</p> <ol style="list-style-type: none"> <li>1. Prepare veg. Place in a pan of boiling water for 2 minutes if small, 4 minutes if larger.</li> <li>2. Drain and plunge into a bowl of ice cold water (to prevent them from carrying on cooking)</li> <li>3. Drain again and pat dry.</li> <li>4. Place in labelled freezer bags and return to the freezer. They should keep up to 6 months.</li> </ol>			Baskets or trugs Bowls of water Baking trays Freezer bags Marker pens  Large pans Bowl with iced water Clean dry tea towels Freezer Bags Marker Pens
0.20	Children have a go				
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	*Which vegetables freeze best is a matter of trial & error! Some work best uncooked, others may need blanching and others are best incorporated into soups etc. It is good to remember that freezing destroys the structure of anything with a very high water content, such as raw lettuce, potato, courgette & cucumber. When they are defrosted they will become a mush! A good wet weather activity would be to get the children to tray freeze a variety of your garden produce, make predictions as to what will work best and then defrost at a later session and see how the produce fairs. They could work out why some produce freezes better than others.				



# Session Plan



Term	Any	Date		Week No	Any
Subject	<b>Growing Microgreens</b>				
Objectives	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Describe what is a microgreen</li> <li>2. Plant a seed</li> </ol>				
TIME	CONTENT	DETAILS	RESOURCES		
0.00	Arrive, register, get changed, brief introduction to session	<b>Microgreens</b> are greens, lettuces, and herbs that are harvested when they are quite young - generally when they are approximately 2.5cms tall. Any lettuce, salad green, or herb can be grown as a microgreen. They are simple to grow, and provide you with a quick harvest for not much work. You can add them to salads, sandwiches, or stir-fries, and it's much cheaper to grow your own than it is to buy them.			
0.10		<ol style="list-style-type: none"> <li>1. Fill a container to within 2cms of the top.</li> <li>2. Sow the seeds 0.5 – 1.5cms apart, in rows, so it's easier to mix and match. Cover with finely sieved compost (about 0.3-0.5cms deep) and use a sprayer to keep the compost just moist.</li> <li>3. Place your container in a spot where it will get at least four hours of sunlight (but avoid strong sunlight). If you're growing them indoors, a south-facing window is best, but an eastern or western-facing one will do as well.</li> <li>4. Do not let the soil dry out, and be sure to remove any weeds so that the tiny greens don't have to compete with them for water and nutrients.</li> </ol>	Containers (should be at least 5cms deep. You can even use recycled plastic takeaway containers as long as you punch drainage holes in the bottom.) Drainage Trays Seeds (see notes below) Potting Compost Water Spray Labels/Pen/Chinagraph Pencil		
0.50	Tidy up, wash hands, change. Leave				
Notes	<p>Varieties to try - Amaranth, Arugula, Basil, Beet greens, Beetroot, Broccoli, Buckwheat, Cabbage, Chicory, Daikon Radish, Endive, Garlic Chives, Golden Purslane, Kale (try 'Cavolo Nero' or red-leaved types), Kohlrabi, Land Cress, Lettuce (any), Linseed, Mibuna, Millet, Mizuna, Mustard, Orach, Pak choi, Parsley, Peas, Perilla, Radish greens, Rocket, Salad Mix, Shungiku, Silverbeet, Spinach, Sorrel, Sunflower Tatsoi, Watercress. Grow at the appropriate time of year for optimal germination of the seed. Suttons (<a href="http://www.suttons.co.uk/Gardening/Vegetable+Seeds/Featured+Vegetable+Seed+Ranges/Windowsill+Gardening/Rocket+Victoria_150400.htm#150400">http://www.suttons.co.uk/Gardening/Vegetable+Seeds/Featured+Vegetable+Seed+Ranges/Windowsill+Gardening/Rocket+Victoria_150400.htm#150400</a>) sell Rocket Microgreens Seeds – Victoria, which can be grown year round.</p> <p>The best time to harvest microgreens are when they've developed their first set of true leaves (the first ones are seed leaves, and don't look anything like the actual leaves of the plant), which is generally about 10 days to 2 weeks after planting. To harvest, simply snip the microgreens just above soil level.</p> <p>You won't be able to get additional harvests from one planting of microgreens. This is because the plants haven't had much time to develop, and as you're snipping off everything except the very bottom of the stem, the plant has no way to generate new growth. You can plant another crop after harvest by simply scattering fresh seed and covering it with soil. You don't need to remove the old roots; they are good sources of organic matter.</p>				



## Session Plan



<b>Term</b>	Autumn	<b>Date</b>	Any time	<b>Week No</b>	
<b>Subject</b>	<b>Pot Cleaning - INSIDE/OUTSIDE</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Understand why we need to tidy up</li> <li>2. Use &amp; care for equipment</li> </ol>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>		<b>RESOURCES</b>	
0.00	Arrive, register, get changed, brief introduction to session	It is important to tidy up gardens to make them safe places for people & also to make sure that pests & diseases aren't harboured in the pots ready to infect seedlings in the spring.			
0.10	Brief introduction to activities	<ol style="list-style-type: none"> <li>1. Knock out any old soil (outside!)</li> <li>2. Clean in buckets of warm soapy water. Rinse in clean water.</li> <li>3. Allow to drain if space allows, otherwise dry with old tea towels.</li> <li>4. When finished stack them tidily away.</li> <li>5. If you have storage space, children could design &amp; label shelves for different sized pots *.</li> </ol>		Buckets of warm soapy water, (waterproof painting aprons (optional) Small scrubbing brushes or old toothbrushes Disinfectant spray (for recipe see page 17) Old tea towels	
0.20	Children have a go				
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	<p>* Sorting pots is a useful exercise for smaller children. In a group discuss how you will sort them. Is it useful to sort them by colour? If you are sorting by size, measure the diameter of each pot with a ruler so that you know what size each pot is. Label each stack of pots with a sticky label. Ask the children to note whether it is a full sized pot or a half sized pot; deep or shallow?</p> <p>Use coloured hoops and sort some of the pots into a 3D Venn diagram. Try single sets for each size. Then look for intersecting sets, pots in half sizes for example but with the same diameter. You could then try sorting pots by circumference rather than diameter.</p>				



<b>Term</b>	Summer/Autumn	<b>Date</b>	From May onwards	<b>Week No</b>	Ongoing
<b>Subject</b>	<b>Preserving - Jam</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Understand that fruit &amp; vegetables will become rotten if left</li> <li>2. Understand that it needs to be preserved in some way if it is to last longer</li> <li>3. Making jam is one method of preserving food.</li> </ol>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>		<b>RESOURCES</b>	
0.00	Arrive, register, get changed, brief introduction to session, wash hands	Once fruit and vegetables are picked, unless they are eaten quickly, they will begin to go bad, so they need to be eaten while fresh or be <b>preserved</b> . Preserving is when food is treated to prevent decay and then it can be kept for future use. For example, you may have too many strawberries at once to eat in May and then none in the winter. But if you make the strawberries into jam you can eat them all year. <b>Making Jam</b> - In a high enough concentration sugar can be a preservative because it desiccates (dries out) the cells of any microbes e.g. bacteria, slowing their growth. Due to its high sugar content, jam is an example of a sugar-based preservative, as are maple syrup & honey. The reason why jam can go mouldy on the top layer is because it has come into contact with moisture in the air which re-hydrates (returns water to) the microbes. Read more - <a href="http://wiki.answers.com/Q/Is_Sugar_a_Preservative#ixzz1V6FK6PYJ">http://wiki.answers.com/Q/Is_Sugar_a_Preservative#ixzz1V6FK6PYJ</a>			
0.10	Making Jam together	<b>Warning! JAM MAKING INVOLVES COOKING AT HIGH TEMPERATURES, EXTRA CARE IS NEEDED!</b> <b>Easy Microwave Jam Recipe (<a href="http://www.allotment.org.uk">www.allotment.org.uk</a>)</b> <ol style="list-style-type: none"> <li>1. Sterilise your jam jars by washing them thoroughly in hot, soapy water. Then place them in a moderate oven (250°F/120°C/gas mark 1) until they are dry.</li> <li>2. Place a saucer in the freezer. Wash and prepare fruit and place in a LARGE microwavable bowl with lemon juice.</li> <li>3. Microwave on high for 4-5 minutes until fruit softens slightly.</li> <li>4. Stir in sugar and microwave on high for 20 minutes stirring occasionally.</li> <li>5. Drop small amount onto cold saucer and check for setting point(for more info see 4 on hob top method.) It will be slightly thinner than normal. Add 5 minutes more cooking on high if necessary (can vary for different fruits).</li> <li>6. Leave to stand for 5 minutes.</li> <li>7. Spoon into hot sterilised jars, seal and label. Should make 2 average sized jam jars.</li> </ol>	<b>Ingredients</b> 500g strawberries (works equally well with other berries too) 1/4 cup lemon juice (approx 1 and 1/2 lemons) 2 cups sugar (1lb) Jam jars Bowl of hot soapy water & gloves Oven Saucer (freezer where available) Bowl of water Scales Large microwavable bowl Knife & lemon squeezer Wooden spoon Discs of waxed paper Labels		
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	We have opted for a microwave jam recipe as most schools will have a microwave, even if it is in the staff room, and they are relatively portable, so can be moved to where you are holding the gardening club. This jam will seem runnier than normal but cooking continues during standing time and it sets well once in jars and cooled. It works well with strawberries and gooseberries. A traditional hob top method is also included on our website, <a href="http://stroudvalleysproject.org">stroudvalleysproject.org</a> .				



# Session Plan



<b>Term</b>	Autumn	<b>Date</b>	From September onwards	<b>Week No</b>	
<b>Subject</b>	<b>Preserving – Chutneys</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Understand that fruit &amp; vegetables will become rotten if left</li> <li>2. Understand that it needs to be preserved in some way if it is to last longer</li> <li>3. Making chutney is one method of preserving food.</li> </ol>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>			<b>RESOURCES</b>
0.00	Arrive, register, get changed, brief introduction to session, wash hands	Once fruit and vegetables are picked, unless they are eaten quickly, they will begin to go bad, so they need to be eaten while fresh or be <b>preserved</b> . Preserving is when food is treated to prevent decay and then it can be kept for future use. For example, you may have too many strawberries at once to eat in May and then none in the winter. But if you make the strawberries into jam you can eat them all year. <b>Preserving with Vinegar (Pickling)</b> Vinegar contains acetic acid, but is not considered a harmful chemical and is used commonly as a natural food preservative. It is the acetic acid that kills microbes e.g. bacteria and slows down food spoilage. There are different types of vinegar depending upon the sugar base from which they have been made.			
0.10	Making No Cook Chutney all together	No-Cook apple chutney ( <a href="http://www.edibleplayground.co.uk">www.edibleplayground.co.uk</a> ) <ol style="list-style-type: none"> <li>1. Peel, core and then grate the apples. Adding a squeeze of lemon juice to the grated apple to prevent it turning brown.</li> <li>2. Grate the onions (have a spoon ready to suck so there are no tears!)</li> <li>3. Very finely chop the dates and cut the sultanas in half.</li> <li>4. Put the fruit and onions in a large ceramic bowl, add the sugar and vinegar and stir well. Cover with a cloth.</li> <li>5. Leave in a cool place for 3 days*. Stir every day.</li> <li>6. Sterilise the prewashed jars by putting them upside down in the oven and turning the heat on to 250°F/120°C/gas mark 1. When the oven is up to temperature, turn it off and leave the jars inside to cool gradually. Sterilise the lid by boiling for 5 minutes in a saucepan of water. You need rubber lined lids for chutney as vinegar will make metal lids rust.</li> <li>7. After 3 days, pour the chutney into jars and leave to mature for 2-3 months</li> </ol> <p><b>Caution: The level of acidity in a pickled product is as important to its safety as it is to taste and texture. Do not alter vinegar, food, or water proportions in a recipe. There must be a minimum, uniform level of acidity throughout the mixed product.</b></p>			<b>Ingredients</b> Per pair of children 1 large cooking apple (around 200g) 2 small or 1 large onion (around 200g) 150g dates 50g sultanas 200g soft brown sugar 260ml malt vinegar Scales Apple peelers Graters Chopping knives & boards Large bowls Tea towels Spoons Oven Jars Labels
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	* At this stage, there are a couple of options. The club leader could take the covered mixture home and bring it back the next week for the bottling or it could be sent home in sealed plastic containers with the children. Alternatively, you could ask a member of staff at the school if they could get the children to stir the chutney at playtime each day until the next session.				



# Session Plan



<b>Term</b>	Autumn	<b>Date</b>	October onwards	<b>Week No</b>	
<b>Subject</b>	<b>Planting Autumn Garlic</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ul style="list-style-type: none"> <li>Plant garlic cloves correctly</li> </ul>				
TIME	CONTENT	DETAILS	RESOURCES		
0.00	Arrive, register, get changed, brief introduction to session	Garlic belongs to the onion family. Its close relatives include the onion, shallot, leek & chive. It's thought to have originated from Central Asia. It is mainly used to flavour food but has lots of medicinal qualities and is believed to kill microbes such as bacteria. It was known to the Egyptians and the sticky juice within the cloves is used as an adhesive in mending glass and porcelain in China (Wikipedia.) China is currently the biggest producer of garlic. Plant garlic cloves in midwinter (ideally before Christmas) in a sunny, well-drained place to ensure your best harvest the following summer. In mild regions, the cloves can be planted out in prepared ground or simply plant into seed trays and set out the young plants in March.			
0.10	Brief introduction to activity, then Children have a go	<ol style="list-style-type: none"> <li>Pass around the cloves of garlic so the children can see them - look at size and shape – they are like the ones used for cooking but specially bred so that they are free of disease. You can try planting ones bought from the supermarket but the results may not be as good. (Could do a trial to compare.) Prepare the ground. It should be fertile but not recently manured. Dig it lightly &amp; rake. Remove any large stones &amp; lumps.</li> <li>Break garlic bulbs into individual cloves ready for planting. Remove most of the papery outer layers but take care not to damage the cloves as this can lead to rotting.</li> <li>In mild regions, simply push the cloves into the soil (approx 2cm deep) so that the tip of each one is just below the surface. Plant 10-20cm apart, flat end down. Water well. Cover them with cloches in frosty weather.</li> <li>In cold areas and to speed up the growth-rate of the crop, plant the cloves in divided seed trays of multi-purpose compost. Water well and place trays in a cool greenhouse or cold frame to grow on.</li> <li>Garlic plants grown in trays will be ready to plant out in March or April. Use a trowel to make a hole and set the plants at the same level as they were growing in the trays.</li> </ol> <p>see <a href="http://www.gardenersworld.com/how-to/projects/garlic-grow/">www.gardenersworld.com/how-to/projects/garlic-grow/</a></p>	Garlic bulbs Spades/ Forks Rake Trowels Seed Trays Dibber/marked garden cane for spacing Labels Watering can <b>You can record the progress of the garlic growth on our Record Sheet (see website)</b>		
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	<b>Harvesting (June - August)</b> Harvest when the leaves start to turn yellow, using a digging fork. The earlier it is in the season, the milder it will be. Use it immediately. For more info see <a href="http://www.bbc.co.uk/gardening/basics/techniques/">www.bbc.co.uk/gardening/basics/techniques/</a> . For Gardening Club Record Sheet see website.				

<b>Term</b>	Autumn	<b>Date</b>	September	<b>Week No</b>	
<b>Subject</b>	<b>Planting Autumn Onion Sets</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ul style="list-style-type: none"> <li>Plant onions correctly</li> </ul>				
TIME	CONTENT	DETAILS			RESOURCES
0.00	Arrive, register, get changed, brief introduction to session	<p>Onions belongs to the Alliaceae (onion) family! Its close relatives include garlic, shallot, leek &amp; chive. It's thought to have originated from Central Asia. There is a lot of historical evidence regarding the onion. It has been found in pyramids and the Egyptians worshipped them! It was also used by Greek athletes 'to lighten the blood' and Roman gladiators to firm up their muscles. It is mainly used to flavour food but they also are reputed to have lots of medicinal qualities such as reducing inflammation from bee stings &amp; killing microbes such as bacteria (Wikipedia.) Common onions are normally available in three colours: yellow, red, and white. China is currently the biggest producer.</p> <p>Onions can either be grown from seeds or sets (tiny bulbs). Seeds are cheaper but more labour intensive and they are more prone to disease. Sets are easier, ready earlier &amp; less prone to disease. Also they are more forgiving of less than perfect soil (could do a seed v set trial to compare). Like sunny, well aired place with medium rich soil (dislikes fresh manure) that holds water but has good drainage. Avoid sets that are 2cm or larger as they are prone to bolt (go to seed early). Radar &amp; Buffalo are good varieties as is Electric (red.)</p>			
0.10	Brief introduction to activity, then Children have a go	<ol style="list-style-type: none"> <li>Pass around the onion sets so the children can see them (look at size and shape – they look a bit like the ones we eat but smaller.) Prepare the ground. It should be fertile but <b>not</b> recently manured. Dig it lightly &amp; rake. Remove any large stones &amp; lumps. Weed.</li> <li>Gently push the sets into the soil (approx 2cm deep) pointed end up &amp; so that the tip of each one is just below the surface. Plant 10-15cm apart, allowing 30cm between rows. Water well initially.</li> <li>If you have any left-over sets they can be planted so they are almost touching and the young green leaves cut as spring onions</li> <li>Make sure that they are kept weed free (as onions are shallow rooted they cannot cope with competition so may bolt.) Once they are established they do not need a lot of watering unless they show signs of wilting.</li> </ol>			Onion sets Spades/ Forks Rake Trowels Dibber/marked garden cane for spacing Labels Watering can <b>You can record the progress of the onion growth on our Record Sheet (see website)</b>
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	<p><b>Harvesting (May - June)</b>            Harvest when the stems start to naturally collapse and the leaves 'rustle.' Using a digging fork, lift the onions from underneath while pulling the bulb from the neck. If possible leave to dry in the sun. Leave on the leaves if you want to make an onion Rope, see below.</p> <p><b>Make an Onion Rope</b> – Cut a 60 – 75cm length of sturdy, natural-fibre garden twine. Make sure that you only use undamaged onions otherwise they may spread mould to the others in the rope. Firmly tie in two onions at the bottom, then wind their leaves firmly up the string. Then add two more on top following the same procedure with each new onion resting on the one below until you reach the top. Then tie a firm knot at the top. Hang up somewhere dry. For Gardening Club Record Sheet see website.</p>				





# Session Plan



<b>Term</b>	Autumn	<b>Date</b>	October - December	<b>Week No</b>	
<b>Subject</b>	<b>Sowing Broad Beans</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ul style="list-style-type: none"> <li>Identify what is a legume</li> </ul>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>		<b>RESOURCES</b>	
0.00	Arrive, register, get changed, brief introduction to session	Broad beans (sometimes also known as fava beans) are among the most ancient plants in cultivation and also among the easiest to grow. It is believed that along with lentils, peas, and chickpeas, they became part of the eastern Mediterranean diet in around 6000 BC or earlier. They are legumes (plants which have special bacteria in their roots which help it 'fix' or get nitrogen from the air. Nitrogen is a fertiliser and so helps the bean plant to grow). Well-known legumes include alfalfa, clover, peas, beans, lentils, lupins, carob, soy, and peanuts. Because broad beans are hardy they can be sown in the autumn or spring. If they are sown in the autumn they hopefully should avoid the blackfly in the spring (when they are a real pest).but they do run the risk of being lost in very hard winters. However, if they are killed, you can do another sowing in the spring. Best autumn planting varieties – Super Aquadulce, Aquadulce Claudia & The Sutton. They like sunny, sheltered positions.			
0.10	Brief introduction to activity, then Children have a go	<ol style="list-style-type: none"> <li>Pass around the beans so the children can see them (look at size and shape – they are just the dried version of the bean that you eat.)</li> <li>Prepare the soil where you are going to plant the beans. It needs to be dug over and either leaf mould or well rotted manure added.</li> <li>Sow the beans 5cm deep and 23cm apart in staggered blocks</li> <li>Water</li> </ol> <p>Or alternatively plant in pots and then plant out as young plants</p> <ol style="list-style-type: none"> <li>Sow 1 bean per 7cm pot</li> <li>Water &amp; place in a frost-free place but avoid heated places as they won't germinate.</li> <li>Harden off (introduce to being outside gradually) before planting outside, 23cm apart in prepared beds (see above.)</li> </ol>		Super Aquadulce, Aquadulce Claudia or The Sutton Beans Spades/ Forks Leaf mould or well rotted manure Dibber or cane with 5cm & 23cm marked on it Pots Labels Watering can <b>You can record the progress of the beans growth on our Record Sheet (see website)</b>	
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	<p><b>Aftercare - pinching out and staking</b></p> <p>As soon as young beans appear at the base of the plant it's time to 'pinch out' the growing tips. Go to the very top of the plant and remove the tip with two leaves attached, you can compost these or steam them as a leaf vegetable.</p> <p>Spacing shouldn't be compromised as good airflow is essential for combating fungal disease.</p> <p>As the plants grow you will need to stake them to prevent the fragile stems from bending or breaking and pods being damaged. Stake after the seedlings are up and use anything from pea sticks to bamboo with string to support the plant.</p> <p>Dwarf varieties will need less space and less staking and are well worth considering especially on windy or small sites.</p> <p><b>Harvesting (April – June)</b></p> <p>Pick from the bottom up when ripe and continue to harvest frequently. Finger thick beans can be eaten whole or wait until the pod bursts open to harvest the fully ripe beans inside.</p> <p>From <a href="http://www.bbc.co.uk/gardening/basics/techniques/">www.bbc.co.uk/gardening/basics/techniques/</a></p> <p><b>See Drying session plan for how to store (p 20.) For Gardening Club Record Sheet see website.</b></p>				



# Session Plan



Term	Autumn	Date	Sept – Early Nov	Week No	
Subject	<b>Storing Apples</b>				
Objectives	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Understand the different ways of storing/using apples</li> <li>2. Understand that only undamaged fruit can be stored</li> <li>3. Identify the ideal storage conditions and reason why.</li> </ol>				
TIME	CONTENT	DETAILS	RESOURCES		
0.00	Arrive, register, get changed, brief introduction to session	Apples can be eaten straight away, used in cooking or stored whole ready to be used at a later date. When storing apples it is important that you only select those which are undamaged, otherwise they may spread mould to the others (hence phrase 'one bad apple...'). Any that are slightly damaged can be used immediately for cooking or juicing.			
0.10	Clean & wrap the apples	<ol style="list-style-type: none"> <li>1. Wash &amp; dry the apples.</li> <li>2. Wrap individual eating apples in tissue paper or cooking apples in newspaper (to stop them drying out) then place in a tray/ box with plenty of ventilation gaps. The apples can touch. The cardboard fruit trays with indentations that you find in supermarkets are ideal to help add separate layers.</li> </ol>	Bowls, water, tea towels Old newspapers, tissue paper Supermarket cardboard fruit trays Crates/boxes with plenty of air gaps		
0.45	Take apples to suitable storage site	The boxes of apples then need to be taken somewhere cool (below 10°C) and dry. They also need to be stored where 'wildlife' (ie rats & mice!) can't get at them.	Suitable store		
0.50	Tidy up, wash hands, change. Leave				
Notes	The apples can then be left and used throughout the winter. Occasionally check the boxes for signs that any apples are starting to go off. If any have started to go mouldy remove them. For apple recipes see recipe section and website.				



## Session Plan



<b>Term</b>	Autumn	<b>Date</b>	September	<b>Week No</b>	
<b>Subject</b>	<b>Potting up Strawberry Runners</b>				
<b>Objectives</b>	By the end of the session, children will be able to: <ol style="list-style-type: none"> <li>1. Identify that plants can reproduce by sending out runners</li> <li>2. Pot up strawberry runners</li> <li>3. Understand that you can get new plants at no cost.</li> </ol>				
<b>TIME</b>	<b>CONTENT</b>	<b>DETAILS</b>		<b>RESOURCES</b>	
0.00	Arrive, register, get changed, brief introduction to session	Show a strawberry plant with a runner coming off it. Explain that strawberries reproduce by sending out stems or 'stolons'* at the end of which new, small plants called runners form. These can then be planted and you get a new plant. Constantly getting new plants is great because strawberry plants only crop well for 3 – 4 years, after which time they need to be replaced.		Strawberry plant with runner	
0.10	Brief introduction to activity	Demonstrate how to pot up a runner. <ol style="list-style-type: none"> <li>1. Choose 4 or 5 of the healthiest runners from each plant. Remove any others.</li> <li>2. If runners are rooted, dig up and pot.</li> <li>3. If they are unrooted, fill up a small pot with compost, place runner on top of compost and anchor in with wire (shaped like upside down u) or with an opened up paper clip with the top broken off.</li> <li>4. Once the runners are rooted cut the stolon* &amp; plant out.</li> </ol>		Trowel Wire/paper clips Soil Pots	
0.20	Children have a go	As above. Once the plants are potted children can label (and take home if desired) then water in well.		Trowels, wire/paper clips. Soil, pots, watering cans, labels	
0.50	Tidy up, wash hands, change				
1.00	Leave				
<b>Notes</b>	* A stolon is a horizontal shoot from a plant that grows on top of or below the soil surface with the ability to produce new clones (identical to parent plant) of the same plant from buds at the tip.				



## A Rough Guide to What to Sow by Month



For more precise instructions please consult individual seed packets

### SEPTEMBER

Christmas Potatoes, Alpine Strawberry & Strawberry Runners, Winter Radish, Autumn Onions, Garlic, Winter Lettuce, Microgreens.

### OCTOBER

Winter Lettuce, Rhubarb, Raspberry Family, Round peas, Broad Beans, Microgreens.

### NOVEMBER

Winter Lettuce, Round Peas, Broad Beans, Plant Fruit Trees, Microgreens.

### DECEMBER

Plant Fruit Trees, Microgreens.

### JANUARY

Plant Fruit Trees, late garlic, early peas, Leeks (indoors), Microgreens.

### FEBRUARY

Plant Fruit Trees, late Garlic, early Peas, chit First Early Potatoes, chit Second Early Potatoes, Tomato (indoors), Leeks (indoors), Cut & Come Again Salad, Broad Beans, Chilli (indoors), Peppers (indoors), Parsnips, Onions, Microgreens.

### MARCH

Plant Fruit Trees, late Garlic, early Peas, First Early Potatoes, Second Early Potatoes, Tomato (indoors), Leeks (indoors), Cut & Come Again Salad, Broad Beans, Chilli (indoors), Peppers (indoors), Parsnips, Onions, chit Maincrop Potatoes, Peas, Mangetout, Sugar Snaps, Early Turnips, Calabrese, Summer Cabbage (protected), Beetroot, Courgette (indoors), Microgreens.

### APRIL

Tomato (indoors), Leeks (indoors), Cut & Come Again Salad, Broad Beans, Maincrop Potatoes, Peas, Mangetout, Sugar Snaps, Turnips, Beetroot, Courgette (indoors), Early Carrots, Chard, Melons (indoors), Sweetcorn (indoors), Pumpkins (indoors), Winter Cabbage, Sprouting Broccoli, Cucumber, Runner Beans, Microgreens.

### MAY

Cut & Come Again Salad, Peas, Mangetout, Sugar Snaps, Turnips, Chard, Sweetcorn, Pumpkins, Winter Cabbage, Sprouting Broccoli, Cucumber, Runner Beans, French Beans, Maincrop Carrots, Microgreens.

### JUNE

Cut & Come Again Salad, Peas, Mangetout, Sugar Snaps, , Turnips, Chard, Sprouting Broccoli, Runner Beans, French Beans, Maincrop Carrots, Microgreens.

### JULY

Cut & Come Again Salad, Chard, Spring Cabbage, Microgreens.

### AUGUST

Chit Christmas Potatoes.





## What to Sow by Term



### Autumn Term – September–December

Fruit/Vegetable	When to sow	When to Harvest	Considerations for schools	Notes
Alpine, Woodland or Wild strawberries	Plant runners after they have fruited and before the frosts.	June - August	These are great for shady places and once you have them they keep multiplying. They are very resilient and will survive even the coldest winter.	These are hard to source and best taken from other people's gardens but even if you only start off with one plant, they will multiply rapidly.
Strawberry Runners	As above	May - June		Good all rounder mid season cropping varieties with good disease resistance are Pegasus & Alice
Potatoes for Christmas dinner	<b>Late August/early September</b> in containers/bags	December	Buy them by early August and start chitting immediately	Choose second crop autumn potatoes. Carlingford is the most popular but Charlotte & Maris Peer are also good. Order early to avoid disappointment!
Winter Radish	<b>Early September</b>	3-5 months later	They are an excellent way to introduce children to gardening	Try Mino Early, a Japanese Daikon radish. Great for stir fries or use grated raw in salads <a href="http://www.unwins.co.uk/radish-mooli-seeds-pid5981.html">http://www.unwins.co.uk/radish-mooli-seeds-pid5981.html</a>
Onions	<b>September</b>	June		Try Senshyu and Radar
Garlic	<b>September</b>	June-August		Try 'Early Wight', 'Purple Wight', 'Solent Wight', 'Arno', 'Germidour', and 'Cristo'.
Winter Lettuce	<b>September – mid November</b>	Harvest leaves from cut-and-come again lettuces when plants are about 5cm (2in) high, or allow the plants to grow to about 15cm and cut the whole head off leaving a 3cm (1in) stump - a new plant should soon re-sprout.		Lettuce 'Valdor', Texsel Greens - also known as Ethiopian greens 'Golden Purslane'
Rhubarb	<b>October</b>	Allow it to establish for a year before taking your first harvest from May to August.		Rhubarb should be divided every five or six years during winter, when dormant.

Raspberry family	October	September – first frosts	Plant autumn raspberries rather than summer varieties as they fruit during the summer holidays. They are also generally much easier to care for.	Prune by cutting the old canes back to the ground December – February. Try Autumn Bliss which is shorter than most and you may be able to get away without supports. Also try Polka & Joan J which came top for taste & yield in Which? Trials.
Peas	Oct/Nov	May/June		Try round/smooth peas Feltham First and Meteor
Broad Beans	Oct/Nov	May - June		Aquadulce
Microgreens	All year	Harvest when they've developed their first set of true leaves which is generally about ten days to two weeks after planting.	Sow inside on a sunny windowsill throughout the year.	Try any lettuce, salad green, or herb such as mustard, kale, beetroot, radish, watercress, mizuna, or cabbage
Fruit trees	November- Feb/March (do not plant if ground is frozen)	3 – 5 years after planting	You need to be aware of the potential size your tree will grow to and whether it's self-fertilising. If space is an issue you could try training your tree along a wall or fence. If your tree is not self fertile you will need another one to produce any fruit.	Try apple, pear, plum, fig and medlar trees. Gloucestershire has over 178 varieties local apple, 127 varieties of pear & 16 varieties of plum! See <a href="http://www.gloucestershireorchardgroup.org.uk">www.gloucestershireorchardgroup.org.uk</a>  For fig & medlar, try <i>Ficus carica</i> 'Brown Turkey' -self-fertile, ideal for training along a wall. It fruits from August to September. Medlar, <i>Mespilus germanica</i> 'Royal Medlar', is self-fertile with dessert fruit from November.



## What to Sow by Term

### Spring Term – January–April

Fruit/Vegetable	When to sow	When to Harvest	Considerations for schools	Notes
Late Garlic	January/ February	June/August Once the leaves have turned yellow.		Garlic is best planted before Christmas but still possible until February
Peas	Early (smooth) types under cloches Jan/Feb	Smooth peas are older types and need to be picked very early to ensure they retain their sweetness.	Their roots don't like being disturbed so plant in pots that can put straight into ground e.g. toilet roll inners. See CLEAPSS website for info on using loo roll inners.	Much more tolerant of cooler conditions so can be planted much earlier. Meteor still fine. For more unusual varieties try. <a href="http://www.realseeds.co.uk">www.realseeds.co.uk</a>
1 <sup>st</sup> Early Potatoes	Chit Feb, sow March	June – September (approx 90 days after planting)	Try sourcing your seed potatoes from a Potato Day Event in Jan- Feb. For some events near you try <a href="http://www.potato-days.net">www.potato-days.net</a> . In Stroud area try <a href="http://stroudpotatoday.blogspot.co.uk">http://stroudpotatoday.blogspot.co.uk</a>	Try Duke of York, it fairs well in taste tests but unfortunately is susceptible to disease
2 <sup>nd</sup> Early Potatoes	Chit Feb, sow March	June – September (approx 90 days after planting)		Try Charlotte, again does well in taste tests but again susceptible to disease
Tomato	Indoors – Feb-April Harden off & plant out from early June	August - October	There are two main types of tomato plants – Bush & Cordon. Cordons are usually trained up some support and need the side shoots pinched out, while bush types develop their side shoots and spread out.	Try blight resistant outdoor type Ferline.  Bush types – Tumbler is suited to growing in baskets & Totem is compact if space is an issue
Leeks	Seeds - Jan/Feb indoors Outdoors March/April	Musselborough Dec - April	If you miss the seed sowing period you can buy ready grown plants to plant out in May - July	Try Musselborough
Summer salad/Cut & come again	Feb - August	April – September  When the leaves are of an edible size, use	This is a really easy, speedy crop. As the seeds are normally so small, watering the soil before sowing will help ensure seeds are in close contact with moist soil,	Try any leafy vegetable like Amaranth, basil, beetroot, chicory, coriander, chard, corn salad, dandelion, endive, komatsuma, land cress, leaf celery, lettuce, mizuna, mustard, pak choi,

Summer salad/Cut & come again cont'd		scissors to snip off a few from each plant. Avoid damaging the central growing point.	rather than watering the row afterwards For an early winter crop: sow outdoors in early August and cover the plants with closed cloches in late September.	parsley, purslane, radicchio, red kale, rocket, sorrel and spinach, Mixed Leaves
Broad Beans	<b>February - April</b>	June - September		Aquadulce should still be fine
Chilli Peppers	<b>February/ March Indoors</b>	June - October	They can't be grown outside but are ideal for a greenhouse or windowsill. Their heat is contained in the oil in the seeds. Always deseed them! Once you have handled them, wash your hands before touching your eyes or tender skin to prevent burning. Remember also that the heat gets more intense towards the shoulder.	Try mild varieties like Anaheim & Gorria. A good source for seeds is <a href="http://www.simpsonseeds.co.uk">www.simpsonseeds.co.uk</a>
Sweet Peppers	<b>Feb/March</b>	June - October	To grow in the UK you need really early varieties. They need heat to germinate (28 - 38°C.) Try a warm airing cupboard or sunny windowsill. Once germinated, the seedlings will grow on at lower temperatures.	Try Gypsy & Lipstick
Parsnips	<b>Feb/March</b>		Parsnip is very easy to save seed from, and you'll get much better seed than you can buy because it doesn't keep or store well.	Try the Student, a variety first discovered in the Cotswolds or 'Tender & True'
Onions	<b>Feb/March</b>			Try Red Baron, Sturon
<b>Peas</b> come in two types – shelling (in which you eat the shelled peas) & mange tout (in which you eat the whole pod)				
Peas - shelling	First earlies <b>March to early June</b> Second earlies & maincrop March - June	Earlies take around 12 weeks, second earlies take 14 weeks and maincrops take 16 weeks.	Require a sunny, nutrient-rich, moisture-retentive site. So need to incorporate well rotted compost or manure. You will need canes & netting for support. The pea moth is active mid-May to mid-June so if have peas flowering at that time, may need to cover with fleece.	First Earlies - Kelvedon Wonder Second Earlies - Early Onward Maincrop (wrinkled) – Tall Telephone. Balmoral is a late maincrop which is ready to harvest Sept/Oct so should avoid holidays.



Mangetout	March - June	12-13 weeks after sowing just as the peas inside start to form	<b>Plant as soon as possible to avoid cropping over the holidays.</b>	Try Pea 'Oregon sugar pod' A rare yellow variety 'Golden Sweet' from <a href="http://www.realseeds.co.uk">www.realseeds.co.uk</a>
Sugar snap	March - June	Same as above	Same as above	Sugar Ann – early cropping.
Turnip	March – earlies Otherwise April - June	Earlies can be ready for harvest 6-7 weeks after sowing! Otherwise Autumn/ winter	Maincrop varieties need planting in July/August so may not be practical for growing in schools	Try Purple Top Milan
Calabrese	March	June – October	Calabrese will mature the same year as sown so won't tie up space as long as sprouting types. It doesn't like being transplanted so sow in final position. It prefers a heavy fertile soil in full sun or semi-shade.	The words 'broccoli' and 'calabrese' are different varieties of the same vegetable! Generally, Calabrese produces green heads whereas broccoli produces purple or white heads. Try Fiesta, it's a later cropping variety so should avoid the holidays.
Summer Cabbage	March under protection, Plant out in May	July - October	Avoid the temptation to grow too many. Just 12 cabbages in a year will be more than enough! Cabbages need soil rich in nutrients. <b>The main period of harvesting is Aug-Sept so may not be suitable if there isn't any access to the garden in the holidays</b>	Usually these are ball headed (drumhead) varieties. Try 'Kilaxy' Or grow red cabbage & treat in the same way
Maincrop potatoes	Chit after Half Term plant after Easter	About 20 weeks after sowing	If you are looking for something different, why not try blue fleshed Salad Blue Potatoes? Not blight resistant. <a href="http://www.plantsbypost.com">www.plantsbypost.com</a> <a href="http://www.thompson-morgan.com/seeds/Purple%20Potatoes">www.thompson-morgan.com/seeds/Purple%20Potatoes</a>	Try blight resistant 'Sárpo Mira', (pronounced "sharpo") a red-skinned maincrop which crops well even in poor soil, has good slug resistance and stores for months. However, it is not considered to be as tasty as some other varieties.
Beetroot	March/April	June – October June sown crops can be left in the ground to fully mature Lift them in October	Beetroot are really easy to grow and the leaves can also be eaten in salads. They like fertile soil so add compost or manure. Harvest once they reach the size of a golf ball.	Try Boltardy or Pablo awarded RHS 'Award of Garden Merit'. It is a F1 hybrid so won't be able to save the seeds.

Courgette	<b>March – May indoors</b>	June - October	Sow seeds on their side in pots (to avoid them rotting) & move plants to their final site in full sun, when all risk of frost has passed. Allow up to 90cm between plants. A couple of plants should be enough.	Try ‘Defender,’ Gardening Which? Best buy. It also has resistance to Cucumber Mosaic Virus. If space is an issue, try ‘Supremo.’ It is also resistant to Cucumber Mosaic Virus. RHS Award of Garden Merit winner. Is an F1 so is self fertile.
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## What to Sow by Term



### Summer Term – April–July

Fruit/Vegetable	When to sow	When to Harvest	Considerations for schools	Notes
Carrot (Earlies)	April	Earlies - Mid July to August	As earlies crop during the holidays it might be better to go for Main crop. See below. Don't feed carrots, this will only encourage the greenery at the expense of the carrot growth.	Try Suttons Carrot Ideal Speedy Veg - A super-fast-maturing Nantes type carrot. Ready to eat in 6-12 weeks.
Chard (Also known as leaf beets)	April - July	August – following June	Needs an open sunny site in rich, moisture-retentive free-draining soil, although it can tolerate some shade in summer. If growing as cut & come again sow thinly and when conditions are warm to avoid mildews. If you are leaving the plants to over winter you will need to protect them with fleece. Cut off the outer leaves first when they are young and tender, working towards the centre	Try 'Bright lights' & Rainbow chard– has a range of attractive coloured stems
Melons	April, plant out in June		Choose an outdoor variety and sow seed in pots somewhere warm. Grow plants to a good size before planting outside, after the last frost date. Plant marigolds to encourage pollinators. <b>Might be tricky to grow. For more experienced gardeners.</b>	In Which? Trials the two that performed the best were 'Magenta' & 'Small Shining Light'. Another popular old variety to try is Blenheim Orange.
Sweetcorn	Mid April (indoors) Mid May (outdoors)	August/ September (be aware may crop in the holidays)	Sweet corn needs a sheltered, sunny spot with well-drained soil. It pollinates best when sown in a block. A minimum block of	Choose an early/middle variety. Swift and Lark are popular varieties. As they take up quite a lot of space, other

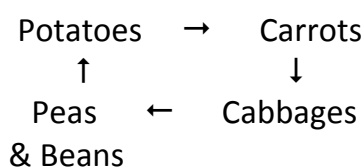
Sweetcorn cont'd			1.2m (4 ft) square is recommended. Freshly picked sweet corn is at its' tastiest because the sugar in it quickly turns to starch reducing the flavour after only a day or so.	crops such as salad can be grown in between.
Pumpkin	<b>Indoors April/May</b> Plant out when the third true leaf is just starting to open	September - November	Pumpkins need a lot of space. Sow seeds on their side in pots (to avoid them rotting.) Restrict the numbers of fruit per plant - usually 2 - 4. Feed every 10-14 days with a high potash liquid fertiliser once the first fruits start to swell.	Try Cheyenne Bush Pumpkin from ( <a href="http://www.realseeds.co.uk">www.realseeds.co.uk</a> ) Jack o Lantern good for carving, Baby Bear is good for eating and is good for smaller spaces.
Winter Cabbage	<b>April - May</b>	Nov - March year after	Cabbages will thrive on almost any well drained ground, but prefer a medium to light soil which will maintain a reasonable amount of water.	They are ball or drum-headed and hardy. Savoys have crinkled rather than smooth leaves. Try Tarvoy, Tundra or Jewel
Sprouting Broccoli	<b>Mid April-June</b>	March – May year after	Transplants well so can be grown in pots first. A good early crop for the early spring, when not much else is ready but if you have a small plot it will lock up space for a long period	Try Early Purple Sprouting Broccoli
Cucumbers	<b>Late April/mid May</b>	June - September	Choose an outdoor non-hybrid variety. Start the seed off somewhere warm in a small pot and plant them out once they have 3 to 4 true leaves. There is also no need to remove the male flowers.	Try 'Burpless Tasty Green' & Marketmore. Another interesting type to grow is the crystal apple. It is shaped like a ball! It only takes about 60 days until you can harvest one. If you are short on space it can be grown up a trellis.
Runner Beans	<b>Late April – early June</b>	July - October	The ideal plant for the beginner gardener. They prefer a position in full sun, although they tolerate part	Moonlight is a new variety of self pollinating runner bean and will set well even in poor weather



Runner Beans Cont'd			shade very well. Not frost hardy! Most will require support but there are dwarf varieties available. Beans need lots of moisture so add well rotted manure to retain moisture in the soil. <b>They may start cropping in the holidays</b>	or high temperatures. As a result they crop earlier. Also try Polestar (stringless variety) & Painted Lady (a pretty variety which can be grown in borders!) 'Hestia' is a dwarf variety, suitable for growing in containers, it crops earlier.
French Beans	<b>Mid May/June</b> (after last frost)	July - October	Plant later to avoid a crop in the holidays. They prefer a sunny, sheltered site. They are NOT frost hardy! It is best to start them off in small pots (hopefully will avoid being eaten by mice!) Climbing types will need supports.	Although not widely available try Cherokee Trail of Tears' Pole Bean from <a href="http://www.realseeds.co.uk">www.realseeds.co.uk</a> or Algarve, with flattened, stringless, pods. A dwarf variety is Purple Teepee, with purple pods which may appeal to children (they go green on cooking!)
Carrot (Maincrop)	Sow successionally <b>Mid May- July</b>	August- October	Carrot fly	Try Autumn King
Spring Cabbage	<b>Late July</b>	April – May (following year)	They like a sheltered, sunny position with light and well-drained soil. Water-logging is a real problem to them thriving. Avoid fertilising as it will encourage leafy growth when the plants are susceptible to frost damage.	They tend to be conical in shape and quite loose leaved, often referred to as spring greens or collards. Try Savoy King or Primo Cabbage

### Crop Rotation

Crops need to be rotated so that the same crop is not grown in the same place for more than one year. This is for many reasons. The main two are that it helps prevent the build up of diseases & different plants need different nutrients from the soil. By growing the same plant in the same place it could use up a single nutrient. To get the best out of your soil, a four year rotation of the main families of vegetables is recommended. See below:





## Things to do Throughout the Year



### January

- Harvest sprouting broccoli
- Harvest Jerusalem Artichokes
- Cook with stored apples – see recipes for mincemeat & apple crumble
- Weed/Manure beds

### February

- Sow chillies indoors
- Sow early broad beans (Aquadulce should still be fine)
- Sow early peas (clothed as they prefer warm soil) – Peas come in two types, wrinkled & smooth. The wrinkled are the modern type and are more suitable as a maincrop as they prefer warmer soil. They also stay sweeter for longer so can be eaten when bigger. Smooth peas are older types and need to be picked very early to ensure they retain their sweetness. However, they are much more tolerant of cooler conditions so can be planted much earlier. Their roots don't like being disturbed so plant in pots that can put straight into ground e.g toilet roll inners. CLEAPSS (Consortium of Local Education Authorities for the Provision of Science Services) & HSE (Health & Safety Executive) state that, 'as long as egg boxes and toilet roll centres look clean, there is no reason why they should not be used.' For a comprehensive pea growing guide see [www.bbc.co.uk/gardening/basics/techniques/growfruitandveg\\_growingpeas1.shtml](http://www.bbc.co.uk/gardening/basics/techniques/growfruitandveg_growingpeas1.shtml)
- If too cold, plant beans in pots under cover
- Sow early parsnips (try variety tender & true or Student)
- Plant late garlic - Only separate the garlic cloves within 24 hours of planting so the root nodules won't dry out and the garlic will be able to set roots quickly.
- Plant rhubarb - autumn is the best time but still possible this month. There are many varieties to choose from! People assume that the redder the stem the sweeter the rhubarb but that isn't true! Some greener varieties such as Victoria are very sweet. If you are forcing your rhubarb, Timperley Early is a good variety.
- Plant onions
- Buy/chit early potatoes
- Turn compost
- Harvest late leeks

### March

- Plant beetroot (try Pablo - awarded RHS 'Award of Garden Merit'. It is a F1 hybrid so you won't be able to save the seeds) & turnips under cloches
- Sow summer cabbage, cauliflowers, purple sprouting & calabrese
- Sow spring onions
- Sow aubergines inside (min temp 20°C)
- Sow peas
- Sow carrots (under cloches)
- Sow tomatoes inside (min temp 20°C)
- Harden off broad bean seedlings then plant out
- Plant potatoes
- Prune back herbs
- Weed
- If you have not already considered it, make sure that you have a supply of **water** for the garden. This is especially important to be up and running before the summer holidays. If you do not have access to an outside tap, consider installing water butts (see additional sheet) or if you have raised some extra money, some sort of automated watering system.

## April

- Plant strawberries – Good all rounder mid season cropping varieties with good disease resistance are Pegasus & Alice
- Sow leeks
- Sow spinach
- Sow summer salad
- Sow onion sets
- Plant main crop potatoes
- Sow herb seeds
- Sow short rooted carrot variety that can be harvested in July or Suttons Carrot Ideal Speedy Veg - A super-fast-maturing Nantes type carrot with uniform, rich-orange roots. Can be eaten whole or grated in salads. Ready to eat in 6-12 weeks.
- Sow cucumbers (most need to be grown in a greenhouse, but some ridged varieties can be grown outside, if grown outside there is also no need to remove the male flowers. One interesting type to grow is the crystal apple. It is shaped like a ball! It only takes about 60 days until you can harvest one. (If you are short on space it can be grown up a trellis.)
- **Sow courgettes** 'Zucchini' – Early cropping variety. Also recommended by the RHS to be an excellent attractant and nectar source for bees and other beneficial insects. 3 or 4 plants should be enough to plant. Mice love courgette seed, and slugs love the baby plants. The seed will also germinate best with a bit of heat, so we sow indoors in small pots, then plant out when they have 3 true leaves. Don't rush - often plants that go out slightly later will catch up and do much better than earlier plantings battered by spring storms from <http://www.realseeds.co.uk/courgettes.html>.
- **Summer squash** plant in pots & keep in a heated propagator or window sill.
- **Sow Parsnips** – Why not try 'student' – a variety first found in the Cotswolds!
- **Sow French & Runner beans** (Moonlight is a new variety of self pollinating runner bean and will set well even in poor weather or high temperatures. As a result they crop earlier from July – October.) It can be sown underneath cloches or in pots under cover. When **sowing runner beans with the children** rather than starting them off in normal pots try growing them in old plastic bottles. This allows the children to see the roots & shoots developing. The young plants can then be planted out as normal later. Collect some 1.5/2l plastic bottles. Cut off the top third. Line the bottle with an old cereal box covered with some kitchen towel. Place a pre-soaked runner bean about 2/3 down the bottle in between the bottle side and the cardboard. Pour in a couple of centimetres of water. Top up the water regularly.
- Sow peas
- Earth up potatoes
- Watch out for pests
- Prepare supports (bamboo/hazel)

## May

- **Sow main crop/late main crop carrots** – Autumn King (sow successionaly March to August. *Main Crop*: These are sown in April/May and harvested in October/November. Sow in drills 2cm deep but 30cm apart. Sow seed very thinly and cover with light soil. Thin seedlings out to 4cm apart. These carrots are particularly suitable for storage after harvest. *Late Main Crop*: These should be sown June/July and are ready for harvesting from December onwards. Late varieties are good for storing and produce large roots. Thin seedlings out to 4 to 5cm apart and avoid bruising the leaves when thinning as the smell can attract carrot fly <http://www.seedaholic.com/carrot-autumn-king.html>) flyaway
- **Plant out outdoor tomatoes**
- **Harvest** broad beans, beetroot, rhubarb, carrots
- **Sow Squashes & Pumpkins** – To give plants a head start, sow seed 2cm deep into small pots either in a heated propagator or on a warm window sill.
- **Sow Swiss Chard & Leaf Beet** – For year round leaves and later winter vegetables
- **Plant out brassicas** – broccoli, sprouts, purple sprouting
- **Plant sweetcorn**
- **Plant out peppers**

- **Plant out courgettes**
- **Mulch strawberries** – by tucking mulch e.g. straw, breathable membrane or strawberry matting right under the strawberries it will keep them clean. Try using matting impregnated with copper which should also deter slugs & snails!
- **Support tomatoes/pinch-out side-shoots**
- **Protect crops** – Cover with fleece to keep out pests – particularly carrots
- Vent/screen greenhouses/ polytunnels – to prevent scorching of plants.

## June

- Sow late lettuce – in hot weather sow in shaded beds or later/earlier in the day when the temperatures are lower.
- Sow cut & come again salad leaves
- Sow herbs
- Sow members of squash family in final position
- Sow late beans
- Harden off then plant out aubergines, peppers & tomatoes
- Plant out greens
- Plant out courgette, cucumber & Squash
- Plant out sweet corn
- Water
- Weed
- Make sure everything is supported
- Tie in pea shoots
- Pot up strawberry runners
- Put down mulch – this will really help reduce the need for watering during the summer holidays
- Earth up main crop potatoes
- Feed tomatoes, aubergines, peppers
- Keep an eye for pests & diseases
- Harvest strawberries, peas, new potatoes, early garlic.

## July

- Sow autumn beetroot e.g. can either be used as a baby beetroot or as a maincrop – the size is dependent on how closely you space the plants.
- Sow peas for autumn – choose dwarf varieties and a slightly shadier spot.
- Plant spring cabbage
- Can still plant turnip, calabrese, kale, carrots & late main crop potatoes
- Plant out leeks
- Plant out winter cabbage
- Earth up brassicas – draw up soil around the base of their stem and firm it down to prevent them being blown over
- Pinch out the tips of runner beans and French beans when they get to the top of their supports so that they produce more beans and become less tangled.
- Pinch out the tops of tomatoes plants when they reach the tops of their canes if you are growing cordon varieties (cordons are tall varieties with a main stem like Gardeners Delight & Moneymaker)
- Keep an eye out for pests on your brassicas
- If the weather is dry, spray runner bean flowers with water to ensure that the flowers set.
- Summer fruiting raspberry canes need to be cut to ground level immediately after they have finished fruiting. New canes need to be tied in to stakes ready for next year.



## Other Ideas for Autumn/Winter Sessions



- **Sow Green Manures/Soil Improvers** – e.g. alfalfa, red clover. These protect & improve empty beds over winter. Dig in the young plants 4 weeks before planting the new year's crops (Sept)
- **Sow Christmas Potatoes** – (Sept.) Plant in early September so that they get a good start before the days get shorter and the temperatures drop. Plant in moveable pots so that they can be moved under cover when the frosts arrive. Keep well watered. Available from [recycleworks.co.uk](http://recycleworks.co.uk).
- **Make cloches** (Sept/Oct)
- **Clean Greenhouse** (Anytime) – Clean inside & out with warm soapy water & brushes, disinfectant spray (for an easy recipe see Autumn/Winter Tidy-Up 2 Session Plan page 17.) If there is snow you can fill up a bucket with it and use it to scrub the greenhouse then polish dry with newspaper! (Gardeners' World Magazine Feb 2011.)
- **Build a Compost Heap** (Anytime) – See page 5.
- **Make Raised Beds** - (Anytime) - See page 2.
- **Construct Greenhouse/Poly tunnel** (Anytime) – See page 8.
- **Plant bare rooted Fruit Trees/bushes** (Oct/Nov)
- **Prepare Produce for Christmas Fairs** – (Dec) - Decorate jars of Home-made Jam & Chutneys – cut out material circles and tie on to lids with ribbon. Use frozen fruit for muffins. Use any apples or pears to make mince meat/mince pies. If you have hazel in your garden, cut it and shape into wreaths and decorate using holly, ivy, seed heads (e.g. fennel flowers).
- **Cut (coppice) hazel poles for Pea Sticks & Bean Poles** (Jan/Feb)- The best time to coppice is well after the autumn leaf fall when the sap has gone down, but well before the sap rises in the spring.
- **Prune Apple Trees** (Nov –late winter) – For pruning courses in January at Brookthorpe near Gloucester see Days Cottage website [www.dayscottage.co.uk](http://www.dayscottage.co.uk)
- **Prune Autumn Raspberries** (Feb)

## Tips for Surviving the Summer Holidays!

**In the spring**, if you have not already considered it, make sure that you have a supply of **water** for the garden. This is especially important to be up and running before the summer holidays. If you do not have access to an outside tap, consider installing water butts (see page 7) or if you have raised some extra money, some sort of automated watering system.

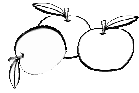
**In June** make sure everything is supported and put down mulch – this will really help reduce the need for watering during the summer holidays

### In July

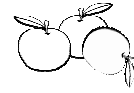
- Harvest as much as you can of produce such as raspberries, strawberries, beans, courgettes, tomatoes & onions before the holidays.
- If you need help covering upkeep of the garden over the holidays put out an appeal to children, staff & parents.
- Make a list of any jobs that need to be done over the holidays with clear notes such as the location of outside taps, water butts etc. Also make sure that any equipment such as watering cans, are easily locatable! Then make a rota. If your school runs a holiday club it might be worth asking them if they wouldn't mind incorporating taking care of the garden into their summer programme.
- If you are getting volunteer 'waterers' in, arrange access to the garden with the school.

**In August**, watering, weeding and harvesting/preserving any produce are the main issues. For tips on freezing see preserving session plans. Offer harvested produce to any waterers as a thank you! Enjoy your summer and the fruits of your labours!

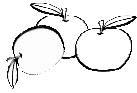




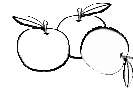
## Winter Veggie Soup – January



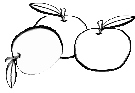
<b>What will it make?</b> Serves 4	<b>How long will it take?</b> About 50 mins
<b>How long will it keep?</b> Will keep in the fridge for a couple of days or in the freezer for up to a month.	<b>Equipment needed</b> Scales, measuring jug, measuring spoons, knives & chopping boards, garlic press, peelers, large non-stick saucepan, wooden spoons, hand blender/liquidiser.
<b>Ingredients</b> 2 Tablespoons olive oil 1 medium chopped onion &/or leek 2 medium carrots peeled & sliced thinly 2 - 4 medium potatoes peeled & sliced thinly 4 large mushrooms washed & sliced 1 clove garlic crushed 200g sliced kale/spring greens 500ml vegetable stock Salt & pepper to taste	<b>Method</b> <ol style="list-style-type: none"> <li>1. Heat the oil in a large non-stick saucepan.</li> <li>2. Add the chopped onion and gently cook until they become clear, do not brown.</li> <li>3. Add sliced carrots and cook for another 5 minutes</li> <li>4. Add potatoes, mushrooms &amp; garlic, Cook gently for a few minutes, keep stirring to ensure the vegetables don't stick, add more oil if they start sticking.</li> <li>5. Add vegetable stock &amp; seasoning.</li> <li>6. Once the vegetables start to become tender add the kale/greens and cook for a further 5 minutes.</li> <li>7. Take off the heat &amp; blend, either with a hand blender or a liquidiser until smooth.</li> </ol>
<b>Notes</b> This recipe is a good way to get children to eat vegetables they wouldn't normally eat whole! It can be adapted according to what you have growing in the garden. If you do change the vegetables try and keep in the mushrooms to give the soup a more savoury flavour.	



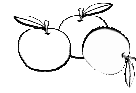
## Swiss Chard Frittata - February



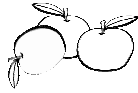
<p><b>What will it make?</b> An egg dish that looks a bit like a thick omelette which can be cut up into smaller pieces for the children to try.</p>	<p><b>How long will it take?</b> 20-30 minutes</p>
<p><b>How long will it keep?</b> Best eaten immediately, although can be eaten cold in a packed lunch.</p>	<p><b>Equipment needed</b> Bowl Whisk or fork Non-stick frying pan suitable for going under the grill. Grill</p>
<p><b>Ingredients</b> 6 eggs 1 onion, peeled and chopped 30g parmesan cheese grated 225g Swiss chard/spinach 2tbsp chopped fresh parsley (optional) Salt and pepper (optional) 2 tbsp olive oil</p> <p><b>Variations</b></p> <p>To increase the size</p> <p>Allow at least 1 egg (and no more than 2 eggs) per person. Use a maximum of 8 eggs in the frying pan and increase the other quantities per person. This recipe is not an exact science so you can add extra cheese or spinach/chard as you see fit!</p>	<p><b>Method</b></p> <ol style="list-style-type: none"> <li>1. Wash the spinach thoroughly* and roughly chop it. Tear the leaves away from the stalks and set aside.</li> <li>2. Peel and finely chop the onion and the spinach stalks and fry gently in the frying pan with the lid on until the onion is soft and transparent. Put the grill on full to heat up.</li> <li>3. Add the washed spinach to the frying pan and gently 'wilt' it. This means cook it slowly so that it softens. At this point it will look a complete mess but don't worry.</li> <li>4. Beat the eggs and mix with the parmesan cheese. Add salt and pepper if necessary.</li> <li>5. Check that there is enough oil in the frying pan to stop the eggs from sticking when you add them and add more oil if necessary and then add the egg/cheese mixture.</li> <li>6. Cook for 4-5 minutes or until the eggs on the bottom are set and golden brown at the edges.</li> <li>7. Put the pan under the hot grill until the top cooks (2-3 minutes or more depending on how efficient your grill is). Once the Frittata has puffed up and the egg is cooked it is ready to eat.</li> <li>8. Serve with crust bread and fresh green salad.</li> </ol>
<p><b>Notes</b></p> <p>* Mrs Beeton says that you need to change the water three times if there are lots of insects etc on the leaves. This works and I have never found insects on leaves after three washes!</p> <p>You will need two adults for this recipe because a lot of it is centred around the hot plate and the grill. The children can be involved in washing the spinach, chopping the onion and the spinach stalks, beating the egg, and grating the cheese.</p> <p>It is often said of Chard that you treat the leaves like Spinach and the stalks like asparagus (i.e. lightly steam them). If you chop them up finely with the onions no-one will be able to tell they are there!</p>	



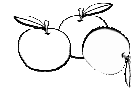
## Leek Macaroni Cheese – March



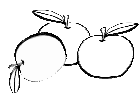
<b>What will it make?</b> Serves 4	<b>How long will it take?</b> About 20 - 30 minutes
<b>How long will it keep?</b> Best eaten straight away. Will keep for a couple of days in the fridge but extra milk may need to be added if it is reheated.	<b>Equipment needed</b> Scales, 2 pans, wooden spoons, chopping board & knives, colander, measuring jug, measuring spoon, grater
<b>Ingredients</b> 300-350g macaroni/spiral pasta 25g butter 2 medium leeks 25g Plain flour 600ml milk Mustard to taste (optional) 80g grated Cheddar cheese Salt & Pepper	<b>Method</b> <ol style="list-style-type: none"><li>1. Cook the macaroni according to the instructions on the packet.</li><li>2. While it is cooking, make the sauce.</li><li>3. First clean the leeks. Place the leek on a board. Make a cut through the middle of the leek, lengthways from the green down to some of the white. Open up the leek like a fan and run it under a tap to wash away any soil.</li><li>4. Cut the leeks into 1-2cm thick slices.</li><li>5. Melt butter in a pan, add leeks. Add salt &amp; pepper if required. Turn down the heat as you don't want the leeks to brown.</li><li>6. When the leeks are tender, add the flour. Stir constantly until the leeks are coated in the flour.</li><li>7. Gradually add the milk, stirring constantly, until all the milk has been added. Add the mustard and salt &amp; pepper to taste (optional.)</li><li>8. Turn off the heat. Add the grated cheese. Stir until the cheese melts.</li><li>9. Add the cooked pasta to the sauce and give it a good stir until the pasta is covered with sauce.</li><li>10. Serve immediately.</li></ol>
<b>Notes</b> Ask the children to bring in a lidded plastic container in advance if they want to take some home.	



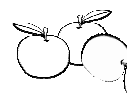
## Eyeball Soup - April



<p><b>What will it make?</b> 6 portions</p>	<p><b>How long will it take?</b> About 45 minutes</p>
<p><b>How long will it keep?</b> A couple of days in the fridge. A month in the freezer.</p>	<p><b>Equipment needed</b> Chopping board, chopping knives, peeler, saucepan, wooden spoon, measuring spoons, hand blender or liquidiser</p>
<p><b>Ingredients</b> 2 tbsp olive oil 1 large onion, peeled and thinly sliced 2 cloves garlic, peeled and thinly sliced 2 carrots peeled &amp; finely chopped 1tbsp Plain flour 500ml Vegetable stock 1 can chopped tomatoes 250g of cooked beetroot, roughly chopped* 1tsp Horseradish sauce (add more or less according to taste) Pinch of sugar Salt &amp; Pepper to taste</p> <p>6 small balls of mozzarella 3 pimento stuffed black olives, sliced in half</p>	<p><b>Method</b></p> <ol style="list-style-type: none"> <li>1. Heat the oil in a saucepan, add the onions and fry them slowly. Then add the chopped carrots. When the onions are just starting to brown, add the garlic and let it fry for another 2 minutes. Then add flour and keep stirring.</li> <li>2. Next add the chopped tomatoes &amp; vegetable stock. Simmer until the vegetables are tender.</li> <li>3. Turn off the heat and add the chopped beetroot and sugar, horseradish sauce, salt and pepper to taste.</li> <li>4. Blend the soup either with hand blender or with a liquidiser.</li> <li>5. Pour into wide bowls (not too deep otherwise the 'eyeball' won't stand out), add a ball of mozzarella with a halved pimento stuffed olive as the pupil!</li> </ol>
<p><b>Notes</b> * Wash a whole beetroot. Do not peel but trim (but not too closely to prevent it bleeding.) Wrap in foil and bake in the oven for an hour (180°C/gas 4) until tender. Allow to cool, then peel beetroot.</p> <p>Alternatively you can also cut the beetroot into chunks and roast with olive oil at 180°C/gas 4 for about 30 minutes (this can all be done at home in advance without the children if there is not enough time during the session.)</p>	

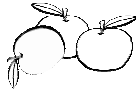


## Broad Bean Pesto & Pasta – May

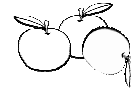


<b>What will it make?</b> Serves 4	<b>How long will it take?</b> About 25 minutes
<b>How long will it keep?</b> Eat immediately	<b>Equipment needed</b> Scales, 2 large pans with lids, colander, chopping boards & knives, food processor
<b>Ingredients</b> 350g pasta, such as penne or farfalle 200g podded broad beans 15g basil leaves 1 fat clove garlic, crushed 15g Parmesan cheese, grated, plus extra to serve 100ml olive oil Salt and pepper	<b>Method</b> <ol style="list-style-type: none"><li>1. Cook the pasta in plenty of boiling salted water according to the pack instructions. Drain and rinse under cold water. Leave to drain in a colander while you prepare the pesto.</li><li>2. Cook the broad beans in plenty of boiling water for about 4-5 minutes. Drain and rinse under cold water. Shell the beans and discard the skins if necessary, very small, young beans will be fine as they are.</li><li>3. Put the beans, basil, garlic and Parmesan into a food processor and whizz for a few seconds until combined but not completely smooth. Then, with the motor running, add the oil in a steady stream until you have a thick sauce. Add salt and pepper to taste.</li><li>4. Toss the cooked pasta with the sauce to coat. Serve with salad.</li></ol>
<b>Notes</b> This recipe is from <a href="http://www.tastesofsummer.co.uk/recipes/recipes/002.html">http://www.tastesofsummer.co.uk/recipes/recipes/002.html</a>	

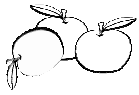




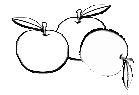
## Salad Bowls - July



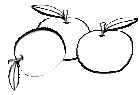
<p><b>What will it make?</b> Each child will have one salad bowl each.</p>	<p><b>How long will it take?</b> 20 minutes</p>
<p><b>How long will it keep?</b> Needs to be eaten straightaway. If the children want to take the salad home, ensure that the dressing is put in a separate pot</p>	<p><b>Equipment needed</b> A small bowl for each child Salad washing facilities Small knives for cutting and slicing</p>
<p><b>Ingredients</b> Lettuce or salad leaves Any salad ingredients you have, choose from radish, cherry tomatoes of differing varieties, large tomatoes, grated carrot or small carrot thinnings, pea shoots, cucumber etc.</p> <p><b>Salad Dressing</b> Use 2/3 oil to 1/3 vinegar. Add one teaspoon of an additional ingredient.</p> <p>Experiment with olive oil (a favourite), sesame oil, chilli oil, sunflower oil.</p> <p>Vinegar – try malt vinegar, spirit or white vinegar, balsamic vinegar, cider vinegar. Try lemon juice instead of vinegar.</p> <p>Try adding teaspoon of mustard, fresh herbs – mint (in moderation), parsley, chives, crushed garlic, roasted sunflower seeds, roasted sesame seeds.</p>	<p><b>Method</b></p> <ol style="list-style-type: none"> <li>1. Wash all the salad vegetables thoroughly. Change the water three times for the lettuce if it has insects on it, remembering to save the water for watering the plants.</li> <li>2. Make a radish rose by slicing the radish along 2/3 of the length from the root end and placing the radish into cold water to allow the radish to cool outwards. This can take a few hours to master, so explain the principle for them to try at home!</li> <li>3. Teach the children how to tear up the lettuce, tearing gently a few leaves at a time. Explain that you don't want the leaves bashed up or squashed, just made into manageable bite sizes.</li> <li>4. Using the lettuce as a base, add the other salad ingredients. Arrange other salad ingredients to garnish the dish and make it look attractive.</li> <li>5. Just before eating, toss the salad in the salad dressing. You may wish to demonstrate how much dressing to use by using too much and watching the salad 'cook' in it, or too little and not being able to taste it.</li> <li>6. Serve with a tasty bread such as ciabatta, or garlic bread.</li> </ol>
<p><b>Notes</b></p>	



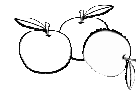
## Runner Bean & Courgette Pasta – September



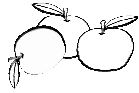
<p><b>What will it make?</b> Serves 4</p>	<p><b>How long will it take?</b> 15-20 minutes</p>
<p><b>How long will it keep?</b> Eat immediately</p>	<p><b>Equipment needed</b> Scales, Knives &amp; chopping board, 2 saucepans with lids, wooden spoons, hand blender, colander</p>
<p><b>Ingredients</b> Enough pasta for 4 (approx 300-350g) 150g fresh tomatoes 2 small courgettes 10 (or so) runner beans 150g butter beans (or chick peas / kidney beans) 1 heaped tablespoon of pesto 100ml creme fraiche or natural yoghurt Knob of butter &amp; tablespoon of olive oil 50g grated Cheddar (optional)</p>	<p><b>Method</b></p> <ol style="list-style-type: none"> <li>1. Wash and trim the courgettes. Slice them or chop them into 1 cm pieces.</li> <li>2. Wash the tomatoes and cut into halves or quarters, depending on their size.</li> <li>3. Wash the runner beans and slice them into 2cm chunks</li> <li>4. Cook the pasta according to the packet instructions</li> <li>5. While the pasta is cooking, heat the butter and oil in a pan. Add the tomatoes and courgettes. Mix well. Cover and cook on a low heat until the courgettes are soft. Stir occasionally.</li> <li>6. Add the runner beans and butter beans to the pasta 4 minutes before it is due to finish.</li> <li>7. Add the creme fraiche, cheese and pesto to the tomato and courgette sauce. Use a hand blender to puree until smooth.</li> <li>8. Drain the pasta and mix with the sauce.</li> </ol>
<p><b>Notes</b> From <a href="http://vegbox-recipes.co.uk/ingredients/runner-beans.php">http://vegbox-recipes.co.uk/ingredients/runner-beans.php</a></p>	



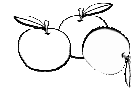
## Pumpkin & Coconut Curry – October



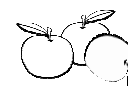
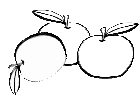
<p><b>What will it make?</b> Serves 4 as a main meal</p>	<p><b>How long will it take</b> About 30 – 45 minutes</p>
<p><b>How long will it keep?</b> Can be frozen for up to a month</p>	<p><b>Equipment needed</b> Scales, peeler, chopping board &amp; knife, 2 saucepans with lids, wooden spoons, tin opener, sieve/colander, measuring spoons</p>
<p><b>Ingredients</b> Pumpkin flesh/butternut Squash 1 medium potato 1 medium sweet potato 1 Tin of chick peas (drained) 1 onion (chopped) 1 clove of garlic (crushed) 2 tbsp of oil 1 tin of coconut milk 1-2 tsp of curry paste (depending on personal taste) Salt &amp; pepper</p>	<p><b>Method</b></p> <ol style="list-style-type: none"> <li>1. Peel potato, sweet potato, butternut squash. Scoop out pumpkin flesh. Cut into 1-2cm cubes. Boil in a little salted (optional) water until a knife will go in but they are still firm (they will be cooked further in the curry.)</li> <li>2. While they are boiling chop the onion &amp; garlic and fry in the vegetable oil in a large pan with a lid until they start to become translucent.</li> <li>3. Add cooked pumpkin/squash, potatoes, sweet potatoes &amp; drained chick peas.</li> <li>4. Add coconut milk &amp; curry paste (experiment with how much to add.)</li> <li>5. Put on lid and allow to simmer until the vegetables are tender.</li> <li>6. Serve with rice and or naan bread.</li> </ol>
<p><b>Notes</b></p> <p>Chick peas may be an acquired taste for some children so they can be left out without affecting the recipe too much!</p>	



## Carrot Muffin – November

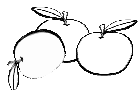


<b>What will it make?</b> 12 big muffins or 36 small muffins	<b>How long will it take?</b> Approx. 30 mins
<b>How long will it keep?</b> One to two days in an air tight container	<b>Equipment needed</b> Muffin tins or cake cases and a jam tart tin Grater Potato peeler Wooden spoon Measuring spoon Mixing bowl
<b>Ingredients</b> 150 ml vegetable oil 250g carrots 200g caster sugar/soft brown sugar 2 large eggs 200g plain flour 2 tsps ground cinnamon 1 tsp baking powder 125g sultanas	<b>Method</b> <ol style="list-style-type: none"><li>1. Pre-heat oven to 170° C.</li><li>2. Wash and scrub, scrape or peel the carrots depending on how old they are.</li><li>3. Grate the carrots.</li><li>4. Crack the eggs into a cup and whisk with a fork until the yoke and white are mixed together.</li><li>5. Place the eggs in a large mixing bowl with the oil and then add the sugar, flour, cinnamon, baking powder, and sultanas mixing it up until it is all mixed through.</li><li>6. Stir in the grated carrots and ensure it is evenly mixed through the mixture. The mixture will be lumpy but this is fine!</li><li>7. Spoon into the muffin tray or the cake cases. Fill 2/3 full.</li><li>8. Place the muffin tray (or the cake cases in a jam tart tin) in the oven for 10-15 minutes.</li></ol>
<b>Notes</b>	

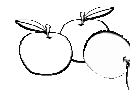


<p><b>What will it make?</b> About 2.5kg.</p>	<p><b>How long will it take?</b> Preparation 30 minutes – an hour (depending on number of children.)</p>
<p><b>How long will it keep?</b> Unopened, up to a year</p>	<p><b>Equipment needed</b> Scales, measuring spoons, chopping boards, peelers, knives, grater, lemon squeezer, small bowls (for chopped fruit), large bowl, wooden spoon, oven, couple of roasting dishes, aluminium foil, jam jars &amp; lids, saucepan.</p>
<p><b>Ingredients</b> 500g Mixture of cooking &amp; eating apples, peeled, cored and finely chopped (can use apples from school grounds or donated ones from children) 350g currants 350g sultanas 300g raisins 250g suet (can use vegetable suet instead) 150g soft brown sugar 75g ground almonds Juice and finely grated zest of 2 oranges Juice and finely grated zest of 2 lemons ½ tsp freshly grated nutmeg 2 tsp ground mixed spice 2 tsp ground cinnamon ½ tsp ground cloves (optional)</p>	<p><b>Method</b></p> <ol style="list-style-type: none"> <li>1. Mix all the ingredients, (except for the alcohol, if using*) together in a large bowl, Cover and leave for 24 hours, so the fruit swells and the flavours mingle. Stir occasionally.</li> <li>2. Preheat the oven to 120°C/250°F/gas mark ½. Spread the mincemeat in a roasting dish and cover with foil. Bake for two to three hours.</li> <li>3. Towards the end of the cooking time sterilise the <b>prewashed</b> jars by putting them upside down in the oven.</li> <li>4. Remove the mincemeat from the oven then turn it off and leave the jars inside to cool gradually.</li> <li>5. Sterilise the lids by boiling for 5 minutes in a saucepan of water.</li> <li>6. Pack it into the sterilised jars and seal immediately with lids.</li> <li>7. Leave to mature for at least a week.</li> </ol>
<p><b>Special considerations when working with children</b> This mincemeat takes a little time and so may need to be spread over a couple of days or followed up in a normal lesson. The weighing, chopping, peeling, grating &amp; juicing can all take place in one session. Then if the mincemeat is left in the classroom, the children can stir it throughout the day. It can then be cooked in the school oven and put into jars. Or alternatively it can taken home by the garden club leader and then brought back in the next day to be put into jars.</p> <p><b>*As this recipe is for cooking with children, we have removed the alcohol content, but 50-100ml rum, brandy or whisky can be mixed in after cooking and before putting into jars.</b></p>	





## Producing Jams and Chutneys in Schools



Jams and Chutneys are an excellent way of using up fruit and vegetables and selling them is a good way of raising money for the school or the gardening project. Before you start the process, it is worth speaking to any staff that have food handling and hygiene training and ask their advice, or if there aren't any, contact your local Environmental Health Department.

The Safety and Hygiene section of the Food Standards Agency website ([www.food.gov.uk](http://www.food.gov.uk)) contains useful advice and information on food health and hygiene. Avoid working with raw meats, poultry or eggs as their advice shows that these are the most problematic foods. We have summarised the most important points for you to consider when producing food to sell, but this is no substitute for conducting your own research and ensuring that you know all you need to for your particular circumstances.

### Personal Hygiene

- Children should always wash their hands before preparing food (see section below.)
- Their clothes should be clean and they should have clean aprons.
- They should have their hair tied back when preparing food. Ideally they should wear a hair net or hat to prevent hair falling into the food they are preparing.
- Watches or jewellery should not be worn when preparing food.
- No food or drink should be consumed while preparing food. If you let the children taste the food, ensure they all have their own spoon.
- Children should avoid touching their face or nose, or coughing or sneezing whilst preparing food.
- Those preparing food should be well.
- Cuts and sores should be covered with a brightly coloured waterproof dressing.

### Cloths

Use tea towels and dish cloths for one purpose and then launder them afterwards at a high temperature.

### Covering Food

Cover food when you are not using it and put it in the fridge.

### Food Allergies

Ensure you keep a list of all the ingredients used to make a particular product. Include the ingredients on the label. Be particularly careful with ready-made additions to products as these can contain small amounts of problematic ingredients. Ensure you include the oils, seeds, flours and spices used in your list and on your label.

### FSA Hand washing Guidelines

Make sure that everyone who works with food washes their hands properly:

- when entering the kitchen e.g. after a break or going to the toilet
- before touching ready-to-eat foods
- after touching raw meat/poultry and eggs
- after emptying bins
- after cleaning
- after touching a cut or changing a dressing

Harmful bacteria can spread very easily from people's hands to food, work surfaces, equipment etc and effective hand-washing helps to prevent this.

1. Wet your hands thoroughly under warm running water and squirt liquid soap onto the palm of one hand. Rub your hands together to make a lather.
2. Rub the palm of one hand along the back of the other and along the fingers. Then repeat with the other hand.
3. Rub in between each of your fingers on both hands and round your thumbs, then your fingertips and nails. Rinse off the soap with clean water.
4. Dry hands thoroughly on a disposable towel. Turn off the tap with the towel and then throw the towel away.



## POTENTIAL WILDLIFE HAZARDS



### PLANTS

#### Spurges (*Euphorbia* spp)

The milky sap, or latex, of spurges is designed to act as a deterrent for grazing animals. Usually it is white, but in rare cases can be yellow. If it comes in contact with the eyes, nose or mouth, it can produce extremely painful inflammations. Any latex coming in contact with the skin should be washed off immediately and thoroughly. Once the latex hits the air it congeals and partially or completely congealed latex is often no longer soluble in water but it can be removed with an emulsion (e.g. milk, hand-cream). A doctor should be consulted regarding any inflammation, especially of the eyes, as severe eye damage, including possible permanent blindness, may result from acute exposure to the sap. Therefore spurges should be handled with care and children and domestic pets should be kept from coming into contact.



*Euphorbia peplus* or Petty Spurge (left) is a member of the *Euphorbia* family often found as a garden weed

#### Giant Hogweed (*Heracleum mantegazzianum*)

Giant Hogweed contains chemicals which produce changes in the cell structure of the skin reducing its protection against the effects of Ultra Violet radiation. These can be released from the plant simply by brushing against it. Exposure to sunlight after contact with the plant causes severe skin rashes and/or blistering and burns. The effects may not start until twenty four hours after contact but the resulting purple or black scars may last for many years. It may take several years for the skin to return to normal, during which time any renewed exposure to even quite dull daylight will produce new burns. Taken from

[http://en.wikipedia.org/wiki/Giant\\_Hogweed](http://en.wikipedia.org/wiki/Giant_Hogweed)

Young leaves



Plant with flower



Characteristic purple speckled stem



## Lords and Ladies (*Arum Maculatum*)

Lords & Ladies is a common woodland plant of the Araceae (or arum) family. It can grow in woodland or under hedges. It has many names including Cuckoo Pint, Cuckoo Flower, Jack in the Pulpit, Parson in the Pulpit, Devils and Angels and locally in Wiltshire and Gloucestershire, 'Snake Food.'

In April and May, purple spotted leaves appear followed by a poker shaped 'flower' (or spadix) which is often purple or sometimes yellow. In autumn the plant forms a cluster of bright orange/red berries. These berries are extremely poisonous and can irritate the skin, mouth, tongue, and throat and result in swelling of the throat, difficulty breathing, burning pain, and stomach upsets. Apparently the berries taste unpleasant and cause a tingling sensation as soon as they are put into the mouth.

All parts of the plant can produce allergic reactions and the plant should be handled with great care. For further details [http://en.wikipedia.org/wiki/Arum\\_maculatum](http://en.wikipedia.org/wiki/Arum_maculatum)

The plant in spring (below)    The plant in autumn (below)



## Rhubarb Leaves

Eating rhubarb leaves can cause health problems. This is because they contain poisonous oxalates that are absorbed into the bloodstream and cause damage to the kidneys. However, it is thought that a large amount of rhubarb leaves would have to be consumed to make a person sick and it does seem to be common knowledge that only the stalks of the rhubarb plant can be eaten. It is well worth explaining this to children to ensure you have taken all the necessary precautions.

**Symptoms of oxalate poisoning** can include vomiting, nausea, difficulty in breathing, burning throat, stomach pain, diarrhoea and seizures. Extreme cases can lead to kidney damage and kidney stones and some cases can be fatal, though rare.

If such a condition is suspected, get to the casualty department of the local hospital.

**Most people know better than to eat rhubarb leaves. Animals (such as rabbits and guinea pigs) however are unpredictable and your pet can display some of the same symptoms from rhubarb-leaf-poisoning.**

Taken from [www.savor-the-rhubarb.com](http://www.savor-the-rhubarb.com)

## Common Ragwort (*Jacobaea vulgaris*)

Ragwort (pictured below) is a common plant in the Stroud area. It stands from 50-75cm tall with yellow, daisy-like flowers and is found on fields, waste ground and occasionally, school grounds. Some people think it is a dangerous plant and should be removed, but there is now some debate about its toxicity (for more information see [www.ragwortfacts.com](http://www.ragwortfacts.com).)

Some people are concerned about handling ragwort because it contains chemicals called alkaloids, which are toxic to the liver and can cause liver failure. These alkaloids occur in 3% of all flowering plants but a human would have to eat 7kg (14 lbs) in weight in order to reach a lethal dose! It is believed that alkaloids which are absorbed through the skin are non-toxic and are harmlessly excreted from the system within 24-48 hours. There is no evidence that ragwort causes harm by contact or inhalation. In fact, there is very little evidence of harm to humans resulting from ragwort except for those with pre-existing liver damage and a couple of cases where very young children were given large amounts of a herbal tea made with ragwort as a cough medicine.

Although there is no evidence of ragwort harming healthy humans it is more of a problem for livestock. When fresh, it is normally avoided by horses and cattle due to its smell, but when dried in hay it is more likely to be eaten and cause death. You are not obliged to remove it from your land unless you are served with a notice and this is only likely to happen if it presents a danger to livestock.

These plants are visited by 150 species of insects (including bees, flies and butterflies). They are also the main food plant of the cinnabar moth caterpillar so they have tremendous value for wildlife.

Ragwort in flower



Cinnabar Moth



Cinnabar Moth Caterpillar





## White Bryony (*Bryonia dioica*)

This climber is found in many hedgerows and field margins in the Stroud area.

The following information is taken from <http://www.plantpress.com/wildlife/o850-whitebryony.php>

White Bryony is the only British member of the cucumber family and is common in hedgerows. Its angled, bristly stem supports dull green, lobed leaves. It also has spirally coiled tendrils lying to the side of leaf stalks, which allows it to climb up to three metres. It has white five-petalled flowers. These are followed by shiny and rather soft, squashy red berries which are poisonous to humans, as is most of the rest of the plant, including the roots. Forty white bryony berries can be fatal for an adult and only 15 for a child (www.ehow.com.) Eating the berries in smaller quantities can cause serious vomiting, bloody diarrhoea, spasms and paralysis.

White Bryony flowers



Autumn berries



## Stinging Nettles (*Urtica dioica*)

Stinging nettles are common in many gardens and are hard to avoid! It is best to wear gardening gloves but even then, children may still be stung. Nettle leaves are covered with small silky hairs which contain skin irritants called histamine and formic acid (also used by ants as a defensive spray. With its name coming from the Latin word for ant) that irritate the human skin. The itching is due to body defence mechanisms fighting these chemicals.



Left - Stinging Nettle

As the chemicals released by the nettles are acidic, by applying something that is alkaline/ basic, it can help reduce the pain.

**You must first check if you are allowed to administer anything to the children in your care**

**Baking soda is an effective remedy to treat stinging nettles.** Make a thick paste of baking soda by mixing with water and apply it at the affected area. Take care not to make the paste too watery, the thickness of the paste should be sufficient enough to apply at the affected area. Allow the paste to remain on the skin for about thirty minutes. But anything alkaline, even human saliva, can be applied to the affected area for immediate relief if no other solutions are available! Applying toothpaste has also been suggested! If symptoms persist, you can advise parents/carers to consult their GP.



## Yew and Yew Berries (*Taxus baccata*)



Yew is highly dangerous and should be treated with care. All parts, except the flesh of the berries (or arils), contain taxin(e) a complex of alkaloids which is rapidly absorbed. Also present are ephedrine and taxphyllin. When taxphyllin is chewed it releases hydrogen cyanide which is one of the most potent, rapidly acting, poisons known. Where poisoning does occur, in animals or humans, there may be no symptoms and death may follow within a few hours of ingestion. If symptoms do occur, they include trembling, staggering, coldness, weak pulse and collapse.

Yew is one of the plants where the poison is not destroyed when the plant dies. Branches removed from a yew by high winds or pruning will retain their poison. The seed within the berries is highly toxic. Unbroken it will pass through the body without being digested but if the seed is chewed, poisoning can occur with as few as three berries.

Most incidents with yew relate to animals, with farmers reporting cases of poisoning in cattle when dead yew clippings have been dumped on grazing land. However, in the 1980s, four prisoners ate yew as a means of suicide, with three of the four succeeding.

[http://www.thepoisonarden.co.uk/atoz/taxus\\_baccata.htm](http://www.thepoisonarden.co.uk/atoz/taxus_baccata.htm)

## ANIMALS

### Snake Bites

Snake bites are uncommon in the UK. There is only one native poisonous snake, the Adder (*Vipera berus*). Adders are known to be present in the Stroud area. Most snakes will slither away once they feel the vibrations of lots of children but just to be on the safe side consider the following.

Avoid leaving things on the ground such as tarpaulin or cardboard, because these get warm in the sun and would be attractive to snakes. Take care when removing black enviro fleece in warm weather.

If your garden has long grass, ensure that the children wear long trousers or boots. Get the children to make lots of noise and stamp their feet when approaching. Get an adult wearing long trousers or boots to check the long grass first by beating or bashing the grass 3-5 paces ahead, then stand still for a time before moving on to the next patch of long grass. Most snakes would prefer to slip quietly away and will only bite when cornered or stepped on.



An adder with its distinctive markings

### First aid

Get the child to hospital and contact the parents.

### Immediate action

If a snake bites you or someone else you should follow the advice listed below.

1. Remain calm and do not panic. Snake bites, particularly those that occur in the UK, are rarely serious or fatal.
2. Try to remember the shape, size and colour of the snake.
3. Keep the part of your body that has been bitten as still as possible because this will prevent the venom spreading around the body. You may want to secure the bitten body part with a sling (a supportive bandage) or a splint (a rigid support that helps keep the body part stable). However, do not make the sling or splint so tight that it restricts blood flow.
4. Remove any jewellery and watches from the bitten limb because they could cut into the skin if the limb swells. However, do not attempt to remove any clothing, such as trousers.
5. Seek immediate medical attention

If you or someone else is bitten by a snake you should **NEVER**:

- Suck the venom out of the bite.
- Cut the venom out of the bite wound with a knife or other instrument.
- Rub anything into the wound.
- Apply any tight bandage around the bitten limb to stop the spread of venom, such as a tourniquet or ligature. This does not help and can cause swelling, even if no venom has been released by the snake. It can damage the affected limb and amputation of the limb may be required in extreme cases.
- Try to catch or kill the snake.

<http://www.nhs.uk/Conditions/Bites-snake/Pages/Treatment.aspx>

## Bee & Wasp Stings

In a normal school vegetable garden there will be lots of insects and even those that can potentially sting, such as bees & wasps, represent little or practically no threat unless you provoke them. So avoiding being stung in the first place is the best course of action!

You can avoid being stung by an insect by:

1. Wearing long-sleeved shirts and trousers outdoors
2. Not disturbing an insect's nest or bees foraging for nectar
3. Avoiding areas where there are likely to be lots of insects, such as clusters of flowers and piles of wood
4. Moving away slowly without panicking if you encounter wasps, hornets or bees (do not wave your arms around or swat at them!)

However, sometimes you cannot avoid being stung e.g. if you sit on a bee! If someone gets stung the NHS gives the following advice:

### Treating insect stings

Only the females of the honey bees can sting, but rather than having a smooth sting, their stingers are hooked. For this reason, when a honey bee stings, part of the sting often remains in the skin and is visible to the eye.

You should remove this immediately by scraping it out using something with a hard edge, such as a bank card or the edge of a ruler. Do not use a sharp item that may cause you to cut yourself. Do not pinch the sting out with your fingers or tweezers because you may spread the venom or you may cause it continue to pump in the venom. Other bees and wasps do not leave their stings behind.

To treat an insect sting, after you have removed the sting (if you were stung by a honey bee):

1. Wash the affected area with soap and water
2. Put a cold flannel on the area
3. Raise the part of your body that has been stung to prevent swelling
4. Avoid scratching the area because it may become infected

If the sting is painful or swollen, you can also:

- Place an ice pack on the area (try a bag of frozen peas or some ice wrapped in a towel)
- Advise parents/carers to administer painkillers, such as paracetamol or ibuprofen
- Advise parents/carers to use a spray or cream containing local anaesthetic, antihistamine or mild hydrocortisone (1%) (available at pharmacies) on the affected area to prevent itching
- Advise parents/carers to administer an antihistamine tablet (available on prescription or from pharmacies) to help reduce swelling
- 

If the redness and itching get worse or do not clear up after a few days, see your GP.

### When to seek medical help

Seek emergency treatment if you have any of the following symptoms immediately after being stung:

- Swelling or itching anywhere else on your body
- A skin reaction anywhere else, particularly pale or flushed (red or blotchy) skin
- Wheezing or difficulty breathing
- A headache
- Nausea, vomiting or diarrhoea
- A fast heart rate
- Dizziness or feeling faint
- Difficulty swallowing
- Confusion, anxiety or agitation

**Call 999 and ask for an ambulance, because this type of reaction can be fatal.**

If a member of the gardening club is known to be allergic to insect stings, they may carry a syringe (called an auto-injector) loaded with adrenaline. If they do, seek advice regarding what you need to do if they get stung. You may also need to be trained how to use the auto injector if they are unable to administer it. ([www.nhs.uk/conditions/Stings-insect/Pages/Introduction.aspx](http://www.nhs.uk/conditions/Stings-insect/Pages/Introduction.aspx))

### If you get a swarm of bees in your school garden

In a school garden if you get a swarm of bees or a wasp's nest, it is best to get advice to see if you really do need to take action. If you are in the Stroud area, contact Stroud Beekeepers [www.bbka.org.uk/local/stroud](http://www.bbka.org.uk/local/stroud). Very often, it is not necessary to remove bees at all. For example, many nests only last a short while and swarms will often move on by themselves. If you need to remove honey bees, call a beekeeper to assist you. If appropriate, they may be able to use a smoker to calm the bees, then move them safely to a more appropriate place. They will also ensure no honeycomb is left behind, otherwise, this could attract more bees, or even wasps, once the original honey bees have moved on. If you need to move a bumblebee nest, the same applies. Keep your distance from the bees and keep pets and children away.

Bees are rarely aggressive unless provoked, so avoid aggravating them ([www.buzzaboutbees.net/get-rid-of-bees.html](http://www.buzzaboutbees.net/get-rid-of-bees.html).)

## Ticks

If a child has been bitten by a tick, it is important that it is removed as soon as possible to reduce the risk of getting a tick-borne infection, such as Lyme disease (a bacterial infection that causes a rash.) As a garden club leader you will **NOT** be expected to do this but you may be asked what to do by parents/carers. The following is the NHS advice

### To remove the tick:

1. Use tweezers, wear gloves or cover your fingers with tissue to avoid touching the tick.
2. Grab the tick as close to the skin as you can, and gently pull straight up until all parts are removed.
3. Do not twist or jerk the tick as you are removing it because this may cause the mouthparts to break off and remain in your skin once the tick has been removed.
4. Wash your hands with soap and water.

Using petroleum jelly, alcohol or a lit match to remove a tick **does not** work.

### After care

- After the tick has been removed, clean the tick bite with soap and water or an antiseptic (a substance that reduces the growth and development of germs), such as an iodine scrub.
- Do not scratch the bite because this will cause further swelling and increase the chance of infection. Most tick bites will heal within three weeks.

### See your GP if you develop:

- A rash
- A fever (high temperature) of 38°C (100.4°F) or over

You may need antibiotics to prevent Lyme disease. See the Health A-Z topic about Lyme disease for more information about this condition, including the symptoms and treatment.

<http://www.nhs.uk/Conditions/Bites-insect/Pages/Treatment.aspx>

A tick



A tick embedded in the skin





## Suppliers of Seeds and Equipment

**The Recycle Works** [www.recycleworks.co.uk](http://www.recycleworks.co.uk) has a range of equipment for children. They also have bulbs and seeds available and some excellent special offers.

**Stroud Valleys Project Eco Shop, 8 Threadneedle Street, Stroud, Gloucestershire GL5 4HQ** sells Demeter Biodynamic Seeds at £1.70 per packet. For information on Biodynamics please go to [www.biodynamic.org.uk](http://www.biodynamic.org.uk). We have a wide variety of seeds for all types of gardens and also sell gardening equipment. Demeter seeds do a collection which will provide all year round salads and lettuces. This retails at £13.50 and contains many of the varieties mentioned in our pack and also comes with a seed guide booklet. Ideal for compiling salad packs for children to take home throughout the autumn.

[http://www.organicplants.co.uk/acatalog/October\\_Winter\\_Salad\\_Selection.html](http://www.organicplants.co.uk/acatalog/October_Winter_Salad_Selection.html)

This company has a winter salad selection. Available online or telephone 01354 740553

**Suttons** ([www.suttons.co.uk](http://www.suttons.co.uk)) do a leaf mixture that can be sown up to October outdoors, for picking leaves over winter, or sown through the winter under glass or on a windowsill. It is ready to eat in just three weeks. Tel. 0844 922 0606

**Thompson and Morgan** ([www.thompson-morgan.com/quickshop](http://www.thompson-morgan.com/quickshop)) do a Salad Leaves Winter Blend selection containing a slower growing mix ideal for growing through the shorter days of winter providing a nutritious and tasty blend of brassica leaves. It includes Scarlet & Blue Curled Kale, Mustard Red Frills, Rocket Dentellata, Mizuna CN selection. Tel. 0844 2485383.

**Alpine strawberries** available from [www.jerseyplantsdirect.com/alpine-strawberry-mignonette](http://www.jerseyplantsdirect.com/alpine-strawberry-mignonette). Tel. 01534 871 113.

**Organic Catalogue** - Other strawberries are available from [www.organiccatalogue.com](http://www.organiccatalogue.com). Tel 01932 253666.

Also try **Otter Farm** ([www.otterfarm.co.uk](http://www.otterfarm.co.uk)), a pioneering organic smallholding in Devon, which has an interesting range of plants & crops.

**The Real Seed Catalogue** ([www.realseeds.co.uk](http://www.realseeds.co.uk)) is an online source of heirloom and heritage vegetable seeds all specially chosen for the home gardener. Rated '*Ethical Best Buy*' by Ethical Consumer Magazine & '*Best Seed Company 2011*' by The Horticultural Channel.

[www.vegetableseeds.net](http://www.vegetableseeds.net) was set up in 2008 and offers over 400 different types of vegetable seeds. It has free P&P on all UK orders. They aim to email you within an hour of purchase with detailed sowing instructions for the seeds in your order. This electronic method helps them keep the price of seeds low and saves paper.

## Useful Websites

[www.gardenaction.co.uk](http://www.gardenaction.co.uk)

<http://www.allotment.org.uk/grow-your-own/vegetables>

<http://www.rhs.org.uk/Gardening/Grow-Your-Own/Veg-A-to-Z>

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Flora Britannica	Mabey, R	1996	Sinclair Stevenson (Reed International)





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