



Grow Your Own Grub

Printable Version

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Grow Your Own Grub Introduction



Welcome to the Grow Your Own Grub Schools Growing website. We have put together this site to provide help and advice for any schools who want to run an outdoor food-growing project with links to healthy eating and healthy cooking.

We recommend that before going any further you read the 'How to Use This Site' page.

Background

In Summer 2005 members of the Healthy Eating Project at Portsmouth City council ran a successful project called Grow Your Own Grub with two schools in Portsmouth. Children were involved in growing a vegetable or fruit all the way from seed-sowing, caring for the plants as they grew, planting the seedlings into their garden areas, harvesting the food they had grown and then taking part in a taster session! The project ran over three sessions and parents were invited to join in the last session and take part in the food-tasting and some activities and games relating to healthy eating.

The aim of this site is to provide a step by step guide to enable any school to run the same project from the planning stages to the actual practical gardening sessions.

Who is this site for ?

Schools vary greatly in their access to outdoor space from having quite large areas which could be used for food growing to having none at all.....

Our aim is for the Grow Your Own Grub project to be accessible for schools who have limited outdoor growing space as well as for schools who do have spare land for growing. We have also provided several indoor growing activities for schools without any outdoor space at all.

Why start a growing project?

There are many good reasons why a school may want to start a growing project such as Grow Your Own Grub:

- It can provide fun and interesting learning opportunities which are linked to the National Curriculum in subjects such as science, history, geography, art, design and technology and maths.



Introduction

- It offers children contact with the natural world and learning about where their food comes from.
- It can give children an insight into the seasonal nature of food and the variety of foods that can be grown locally.
- It supports government healthy eating schemes and helps to reinforce healthy eating messages such as eating at least five fruit and vegetables a day, the importance of a varied diet and that home-grown vegetables are fresh, nutritious and cheap.
- It links in with the importance of physical exercise for the well-being of children.
- Children can have a practical opportunity to learn how important the environment is; even in inner-city areas.
- The project is a very practical way of learning so it can allow less academic children to shine.
- Through caring for plants and watching them grow children can learn important skills such as patience, caring respect and co-operation; which fit in with Citizenship in the National Curriculum.
- The issues raised throughout the project link in with environmental issues from a local to global perspective. Children will learn that a lot of food is transported to our supermarkets over huge distances when we could have access to more local foods by growing them.
- **It's fun! Growing food in schools can be lots of fun and very creative...**



Overcoming barriers and concerns

If you are concerned about your school's ability to run a growing project we hope that this section will help with alleviating some of those concerns and overcoming barriers such as those listed below:

Time: This site provides session and learning plans and a detailed step-by-step guide on how to run this project, plus some back-up classroom activities if the weather is bad. Our aim is to limit the amount of extra time teachers may need to run this project. We estimate the amount of time needed as 3 hours of practical preparation to start the project and 1 hour teaching preparation for each of the three practical sessions. These sessions will take 4-5 hours of classroom time over approximately 4 months.



Introduction

Expertise: We have included lots of straightforward instructions which means anyone - with or without previous gardening experience - can run this project. The step-by-step project guide goes through each of the 3 stages in detail, lists all the equipment you will need and explains what to do with your produce at the end of the project.

Confidence: Will it grow? By following our instructions the project should be straightforward, but we have provided back-up plans if your plants don't grow! The site does provide a useful Further Resources section should you need any extra help.

Money: A growing project can run with minimal costs involved. We have provided a list of what equipment you will need and how much it will cost. Overall we have estimated that the project will cost schools who are growing in the ground £40 - 50 and schools growing in containers £50 -60. However using recycled materials will cut these costs down.

Resources: When listing the equipment you will need to run the project we have aimed to use the minimum that is necessary. To keep the cost down other options could be to:

1. Ask parents to donate any unwanted or surplus gardening equipment.
2. Use recycled materials, for instance ask parents to bring in any containers which are otherwise thrown away such as large plastic tubs for planting or egg boxes for sowing seeds in. In the section 'Growing in Containers' there are more suggestions on using recycled containers. We have also included a list of useful websites in the 'Further Resources' section of the site including ones where schools can get free resource packs and free advice and information, including downloadable information sheets.

People: You may feel that you don't have enough staff to run the project. The sessions have been designed to be able to run with two staff present (teacher and support) - if your class is divided into four groups three can have an indoor activity while the fourth group is outside gardening, and then each group can rotate activities. One staff member supervises the 3 indoor groups whilst the other is outside working with the more active group.

If you do have more staff (or parents) to help then perhaps the whole class can take part in the gardening activity at the same time. We have included a form letter for you to photocopy and send home to parents inviting them to help run the project.



Wider Context

The Grow Your Own Grub project fits very well into the wider context of government initiatives promoting healthier lifestyles. For instance:

The Fruit in Schools Scheme - ensures that every child aged 5-7 receives a piece of fruit or vegetable every day. This scheme promotes the importance of eating healthy, fresh food. Growing your own food supports this message.

The National Healthy Schools Standard - part of the Healthy Schools Programme led by the Department for Education and Employment and the Dept. of Health. Healthy eating and exercise are two of the key themes of this programme and a growing project can help to reinforce important messages around food and exercise.

The Eco-Schools Programme - a Europe-wide project designed to encourage whole school action for the environment. One of the important elements is promoting healthy lifestyles.

The National Curriculum – there are many ways in which a growing project links in the National Curriculum, (see 'teaching resources' section www.teachernet.gov.uk/growingschools). Healthy Eating Campaigns - such as the 5 a day campaign www.5aday.nhs.uk and Jamie Oliver's Feed Me Better Project www.feedmebetter.com all link in with the values promoted in the Grow Your Own Grub Project.

Introduction



Grow Your Own Grub Project

Grow Your Own Grub Overview



General Overview & Aims

This project involves growing four different vegetables – tomatoes, carrots, peas and spinach - that can be used to make a healthy meal. This is done over three separate sessions over the main growing season between March and July. The project is designed to finish just before the end of the summer term. The children's parents can be invited to join in the final session which involves harvesting and food-tasting activities.



The aims of the project are:

- to encourage children to be as familiar with fruit and vegetables as they are with other types of food
- for children to learn where their food comes from
- for children to learn how to grow a fruit or vegetable which they can eat as part of a meal or a snack
- to promote the five-a-day healthy eating message
- to raise awareness of the seasonal aspect of food
- for parents to be involved with these learning opportunities and to consider growing food at home with their children



feed me better

Action Plan & timescales



There will be three main practical sessions:

Session 1: To take place 4th week in April (or one week either side) and to include:

- Discussion of the project and it's aims
- Learning about the crops you will grow
- Sowing the seeds
- Care of plants until the next session

Session One Sowing Seeds



Overview

Session 2: To take place approximately four weeks later in late May/early June and to include:

- A look at how your seeds have grown
- Transplanting seedlings into the ground, grow bags or pots
- Care of plants until the next session
- Discussion around meal ideas for when your crops are ready to eat
- Draw or write some menu ideas for their food crops

Session Two Transplanting



Session 3: To take place approximately four weeks later in the first week of July (or one week either side) and to include:

- Harvesting of your crops
- Tasting session, depending on your school's kitchen facilities this may be tasting the raw veg with some dips or preparing some simple dishes e.g. salad, sandwich, vegetable kebabs, soup etc.
- Sharing food with parents
- Games/Quizzes to reinforce the messages of the project**

Session Three Harvesting



* Please refer to the **Timescale chart** in the Extras section of the website as a helpful aid. The time scale of the project can be adapted to suit the needs of the school and will also depend partly on the weather and how long it takes the plants to grow.



For class time between the three sessions there are some activities relating to the growing project which will help children learn about the importance of healthy eating and where their food comes from.



Your Growing Area

Fruit and vegetables can be grown in all kinds of different locations, from large areas of land such as allotments to small pots for herbs on a windowsill. Most vegetables can be grown in pots and even fruit bushes and trees can grow in pots.

Your school may have quite a large space to grow food so you can choose to grow all your crops in the ground, or you may have no land at all and will need to grow all your crops in containers or you may want to do a bit of both!



Overview

When choosing some space in the ground or a paved area to do your growing here are a few points to consider:

- Observe where the sun goes - the area will need to get some sunshine each day diagram 1a / 1b (right)
- Try and choose an open site that isn't too overshadowed by trees or tall buildings
- The vegetables/fruit will need regular watering so you will need an adequate water supply, being able to use a tap for watering cans or a hose will be enough
- Observe the wind direction, ideally the area should be a little sheltered but it is not essential diagram 2 (Below)

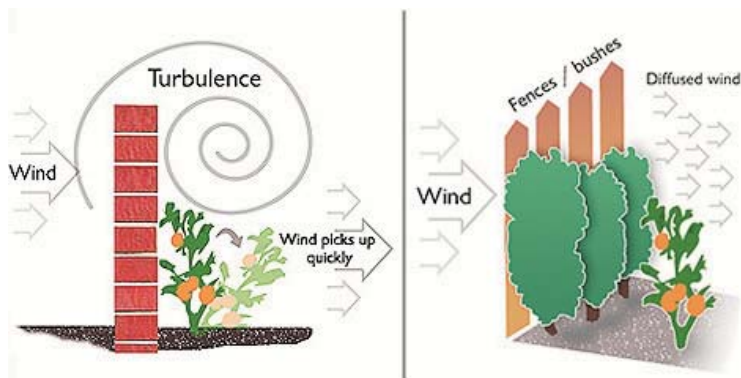


Diagram 2

- If possible don't choose an area near a busy road because of the pollution from car exhausts

At this point you will need to decide if you are going to be growing your plants in the ground or in containers. When you have decided you will need to move on to the 'Container' or 'Ground' sections of this site. In these separate sections we provide help in choosing your ideal growing space as you will need to take into consideration the growing habits of each crop. We also provide some examples of designs/ plans which you may wish to use or adapt to suit your own situation.

Continue on to either :

Container Growing or **Ground Growing**

These conditions are unsuitable for growing

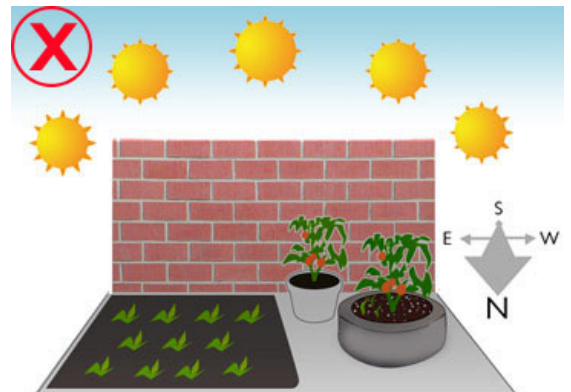


Diagram 1a - North Facing Wall = No sun

These conditions are suitable for growing

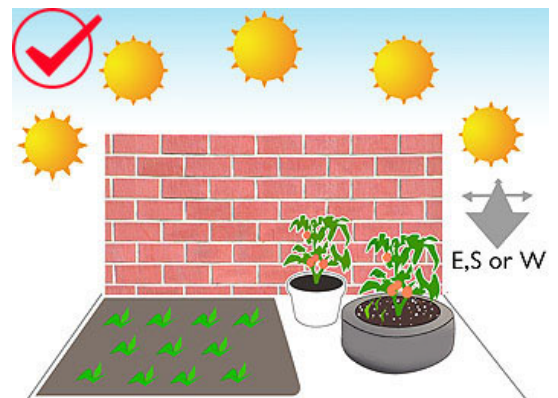


Diagram 1b - East, south or west facing wall = Some sun throughout the day



Look out for these symbols so that you can see immediately whether you are in a "Container growing" section or a "Ground growing" section

Grow Your Own Grub Container Growing



Getting Started

This part of the site is aimed at schools who will need to grow in containers because they do not have any open ground. However, schools with open ground may also choose to plant in containers for a variety of reasons such as:

- a) The ground to be used for growing may be very overgrown and it may be easier to use pots instead.
- b) Pots can be moved about and it may be useful for you to be able to do this at your school.
- c) Pots can be decorated by the children which would bring an art element into the growing project.



Here are the steps to getting started:

1. Choose an area which will be suitable for placing your containers taking into consideration the points discussed in 'choosing your growing area'.



2. Collect your containers. You may choose to buy some using the ordering form (click here to enter the 'Equipment Needed' page) but there may be other ways of getting suitable containers e.g.:

- a) Recycling and reusing! Plants can be grown in any number of interesting containers so long as you can make drainage holes in the bottom and they are sturdy enough to hold compost. You will need to put stones or bits of polystyrene in the bottom of pots to help drainage. Plants can be grown in tyres, old metal pots such as buckets, watering cans or even a colander! Old shoes and boots (especially wellington boots) can look very good and baths or the shell of a broken vacuum cleaner,

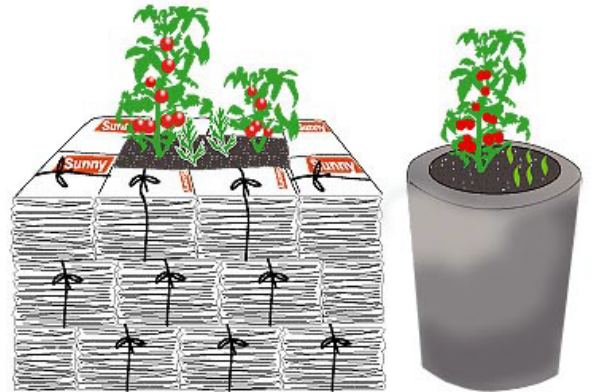


dustbins, old wheelbarrows, plastic food tubs and even old toilets can be used. Children can get involved in decorating them too. Tied bundles of newspapers also make a suitable planting container - see diagram on the right.

(Please see Further Resources for details of ways to find recycled materials such as Freecycle groups)

b) Parents could be asked to donate any unwanted pots (or any of the items listed above) from home.

c) Grow Bags are a cheap and easy way to grow tomatoes



3. Make a plan of your growing area - where and how you want to site your pots. We have included some examples of designs which could be used, (see further down for these examples).

4. Be aware of Health and Safety issues such as leaving clear paths between pots and making sure they are secure.

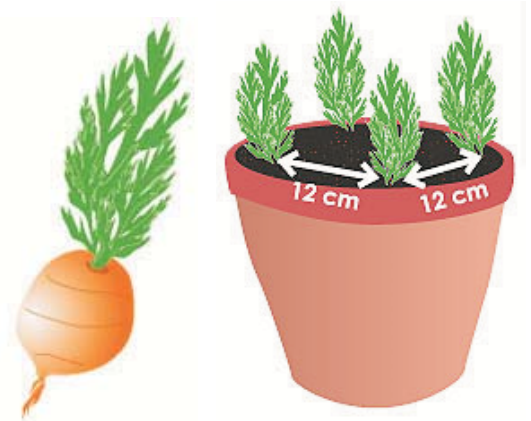


Planning your growing area

When considering the plan of the growing area you will need to be aware of the individual growth habits and needs of each crop you will be growing. This will affect the size of pots you will need and where you need to place them:

Carrots:

We have recommended using the round variety of carrot as they can be sown in trays and then transplanted into pots or troughs. When the carrots are grown from seeds they grow in clumps, each clump of carrots needs to be planted about 12cm apart. They don't have to be in rows so they can go into a pot or trough; they just need to be spaced 12cm apart.



Carrots need a sunny site.

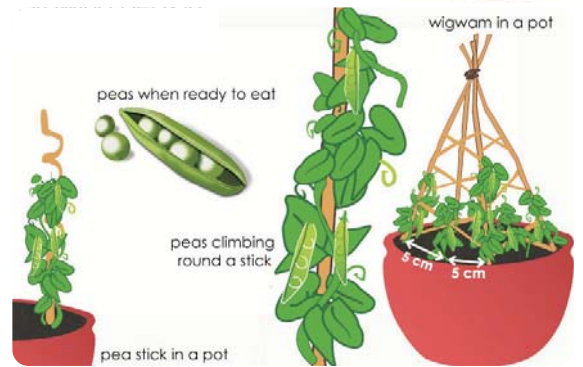


Peas:

Peas can be grown in pots with the support sticks placed in the pots as well. Each pea plant needs to be planted 5cm from the next one. A pea wigwam placed in a pot for the pea plants to climb up looks very effective.



These need a lot of sun and a sheltered site if possible.

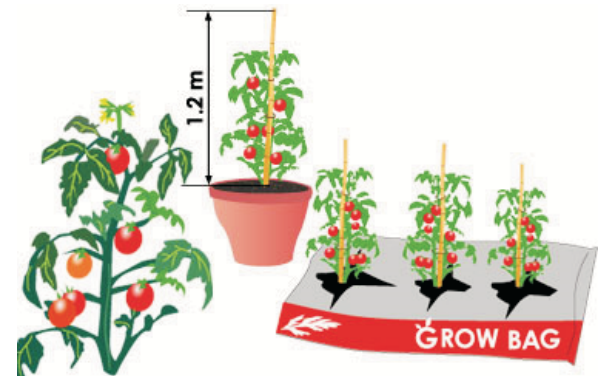


Tomatoes:

Tomatoes need a lot of room to grow, they need to be about 30cm apart so it would be best to either have one tomato plant per pot (minimum size of 6in diameter) or use a grow bag as these will take three tomato plants. A trough could be used as well.



Tomatoes need a lot of sun and a sheltered site if possible.

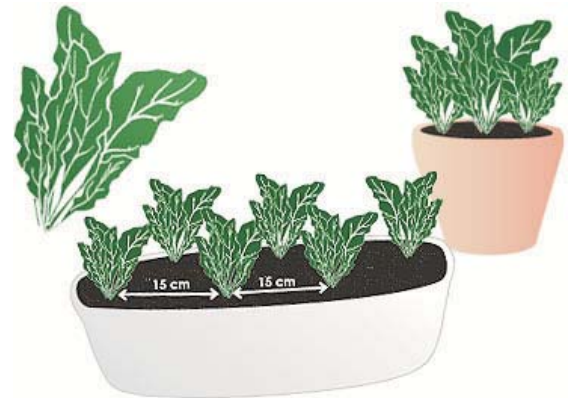


Spinach:

These need to be spaced 15cm apart; they don't have to be in rows so they can go into pots or troughs.

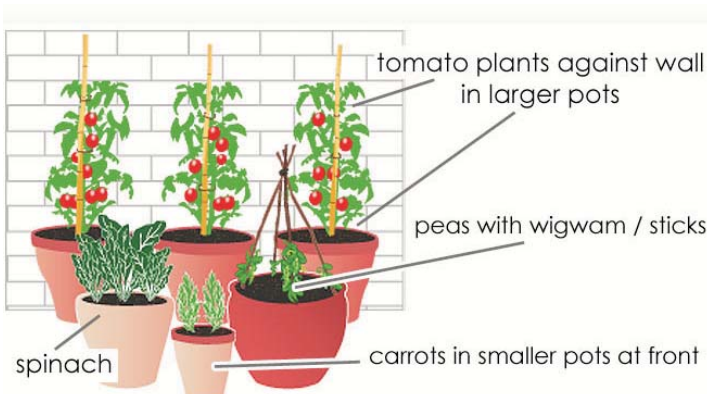


Spinach likes a little bit of shade as well as sun, so the pots could be placed to allow for this.

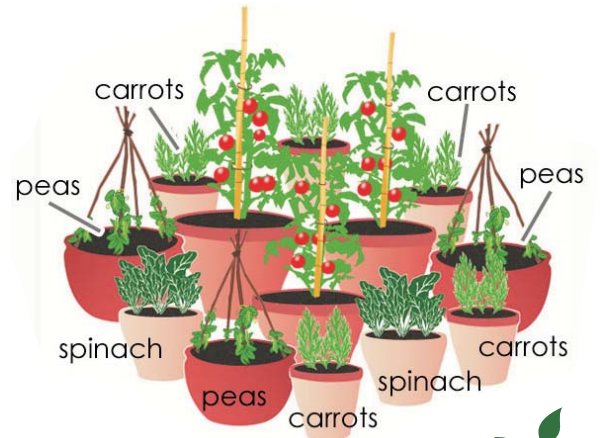


Examples of container growing designs/plans

Design 1 (Below): Against a wall, large pots at back, smaller pots at the front



Design 2 (Below): tomatoes in the centre surrounded by the other pots





Equipment Needed for Growing in Containers

On this page we have listed all the equipment you will need to run your growing project. We have tried to keep costs as low as we can and wherever possible we have suggested ways of saving money and using recycled materials. Promoting recycling and environmental awareness to children is a vital part of this project.

You have two options to think about when buying all the equipment you will need to run this project.



1. If you want to save money, promote recycling and try to get pupil's families involved in the project we have included some suggestions on how to do this.

2. If your school has a reasonable budget to run this project and you need to start the project quickly we have included a printable form listing all the items that you will need. You can fax this form to your local B&Q (or nearest shop that supplies gardening equipment) get quote from them and then order the items if you are happy with the price.

Essential equipment

This list gives quantities for approx. one class of 30 children, so if you are running the project for fewer or more children you will be able to adjust the quantities to suit your school.

1 packet of each of:

Peas (Keveldon Wonder variety)


Tomatoes (Gardener's Delight variety)

Spinach


Carrots (Round variety)*

*This is more of an unusual variety of carrot so you may need to order it from a garden centre or from an on-line gardening site or catalogue. It is the best option for this project but if you can't find the seeds just follow the instructions on the packet of carrot seeds that you do buy.



Look for this symbol: 

A minimum of 1 modular seed tray per group = 4

 Ask families to bring in empty egg cartons -they are great for growing seeds in.

3 bags organic, peat-free multi-purpose compost

This will be enough for the modular seed trays plus 2 pots of carrots, two pots of peas, 2 pots of spinach and 6 tomato plants in pots. If you have compost left over plant more plants!

2 Grow Bags


This will be enough for 6 tomato plants, so you can choose whether to use grow bags or pots for your tomatoes or both!

Large pots – the bigger the better - but you will need at least:


7.5 litre pots for each single tomato plant

5 litre pot for 4 pea plants

5 litre pots for carrot and spinach plants

 Don't forget our suggestions for using recycled containers to save money and promote recycling.


1 x 2ltr watering can with rose

 When the plants are young you will can fill a bucket with water and ask the children to sprinkle water over the seedlings or newly transplanted plants using their hands. Alternatively you can collect plastic drink bottles and fit 'Bottle Top Waterers' to them - they make great mini watering cans for children to use. Bottle Top Waterers can be ordered at www.organiccatalog.com

1 large watering can (for more mature plants)

Bamboo Canes for supporting tomato plants (one for each plant)


For supporting peas you can either buy pea wigwams (1 wigwam will be fine for supporting 4/5 pea plants) or buy Spiral Canes (1 cane for each plant)

 Ask families or local allotment sites to give you some sturdy twiggy branches – they work just as well for supporting peas and tomatoes.

3x Pack Disposable Gloves


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 Your school may already have these for other activities. If you do want to buy reusable gardening gloves for children you can buy these from some garden centres – this is better for the environment and a good idea if your school is planning to run growing activities regularly.





1 Fork and 1 Trowel – for weeding and digging holes for transplanting

 Check in second hand shops for these items, or ask families to donate or lend them – make sure they are safe for children to use .

1 Bucket – to collect weeds/ transport compost

1 Ball Garden Twine – to tie tomato plants to their canes.

 Families may be able to donate these items

 Check if your school has a contract with your local County Supplier – you may be able to order some equipment at special prices.

How to use the Printable ordering form for B&Q

Decide the quantities of equipment that you need – the quantities selected are for a class of 30 children. If you don't want an item select the 'none' option on the menu beside the item.

Fax the form to your local B&Q (go to Store Finder at www.diy.com) or any other diy store/garden centre to get a quote.

If you are happy with the quote you can ask them to make an order up for you.

B&Q can offer you the option of having a Trade Card, this means that you will be invoiced after you have placed the order so you won't need to visit the store. Check if your school already has a Trade Card or ask a member of staff at B&Q to send you an application form. Other stores may also offer this service.

Ask if the store will give you free delivery. Some B&Q stores will also offer gardening advice, so it is worth asking the Store Manager.

Please refer to the pdf equipment order form (container): www.growinggrub.co.uk/container/equipment_order_form_container.pdf



You are now ready to move onto Session One

Grow Your Own Grub Ground Growing



Getting Started

If your school does have some open ground outside then here are some steps to getting started:

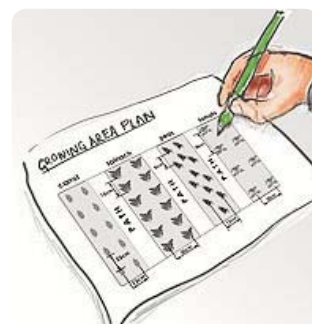
- Choose an area to grow your crops, taking into consideration the points discussed in 'choosing your growing area'.
- You may need to clear the ground first and alternatives to using strong weed killers (which are not good to use near children) are to:

a) Weed the area by hand with a trowel and/or dig out the larger weeds or plants with a fork depending on how overgrown the area is. Try to get all the roots out otherwise the weeds will re-grow.

b) If you don't wish to start your growing immediately you could 'mulch' the area. Mulching is very simple and involves covering the area with any material which blocks out light. This could be black plastic, carpet or cardboard (large sheets which overlap are best). If you do use carpet then use only the Hessian backed type as the foam type will just disintegrate and leave lots of foam bits in the soil. A mulch will kill the weeds underneath but needs to be left on for at least a year so is not appropriate if you want to start growing immediately.

• If you want to improve the soil then adding compost or well-rotted manure will improve all soils. For instance, if the soil is very loose and sandy or very hard and clay-like then digging in compost or manure will improve the structure of the soil and make it easier to grow vegetables.

• Make a plan of your growing area; we have included some examples of designs which you could use. These designs are for use with the Grow Your Own Grub Project but could be used to grow other food too.



Planning your growing area

If your school does have some open ground outside then here are some steps to getting started:

When planning your growing area you will need to be aware of the individual growth habits and needs of each crop you will be growing:

Carrots:

We have recommended using the round variety of carrot as it can be sown in trays and then transplanted into the open ground. When the carrots are grown from seeds they grow in clumps. These clumps of carrots are sown in rows and each clump must be 23cm apart from the next clump. When one row is completed then plant a second row 23cm from the first. The rows can be long or short rows depending on the amount of space you have.



Carrots need a sunny site.

Peas:

Peas can be grown in rows or made into a wigwam shape. Each pea plant needs to be about 5cm apart and each row about 15cm apart. If planting in a wigwam shape (see diagram) then ensure the pea plants are still 5cm apart. It is important to remember that peas will need something to grow up as they get quite tall - they will need twiggy sticks which are about 1.2m tall.



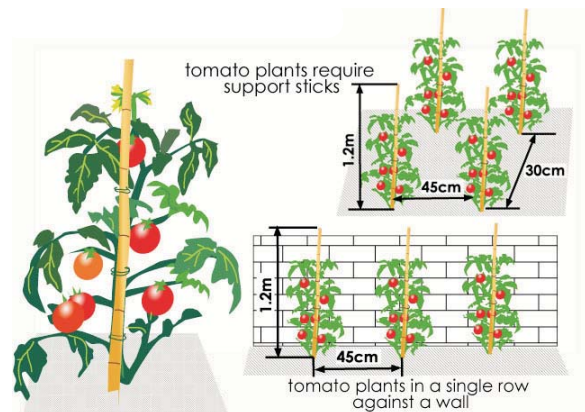
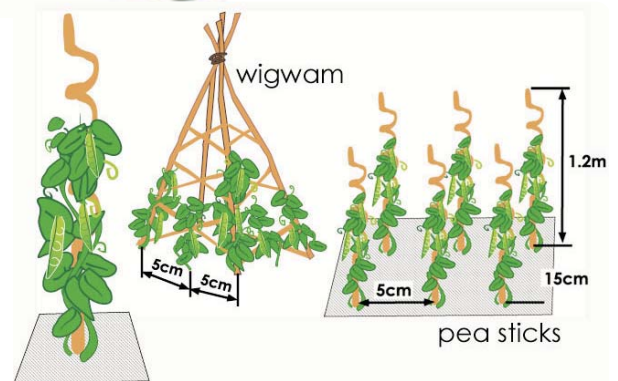
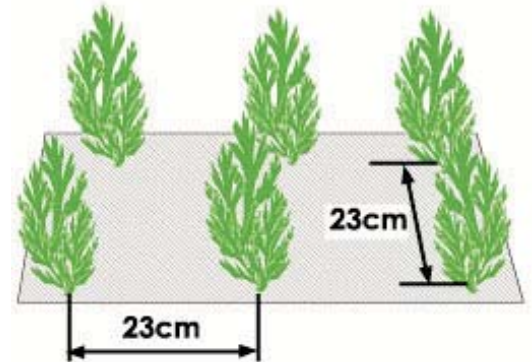
These need a lot of sun and a sheltered site if possible.

Tomatoes:

These are best planted 45cm apart in rows which are 30cm apart, but you could plant them in a single row against a wall for instance. Tomato plants will also need support and sticks at least 1.2m high will be needed.



These need lots of sun and a sheltered site if possible.



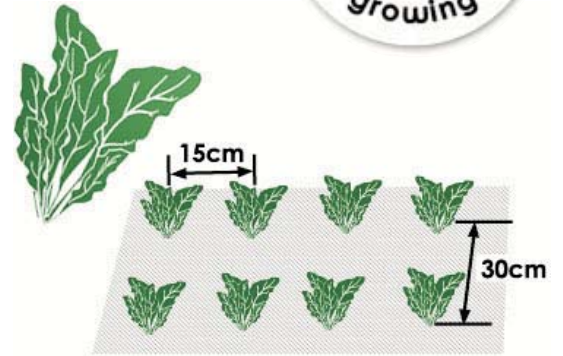
Spinach:

These plants are sown in rows and need to be 15cm apart in their rows. Each row needs to be 30cm apart from the other.



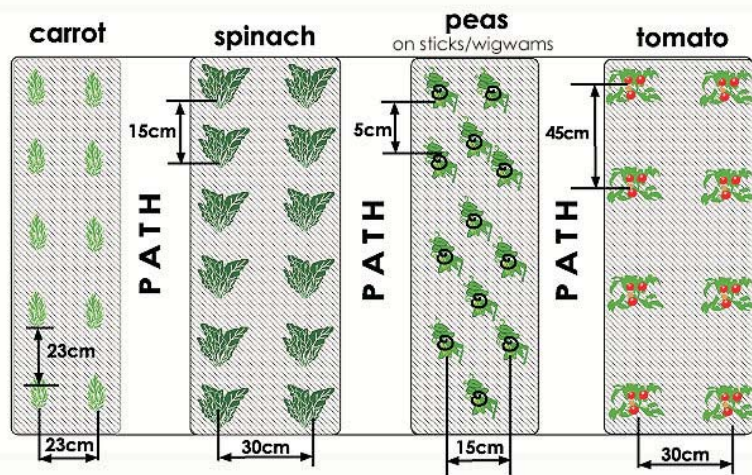
Spinach can be grown where there is some shade.

!! You may want to take a look at the container section of the site as you may want to have a mix of ground and container growing !!

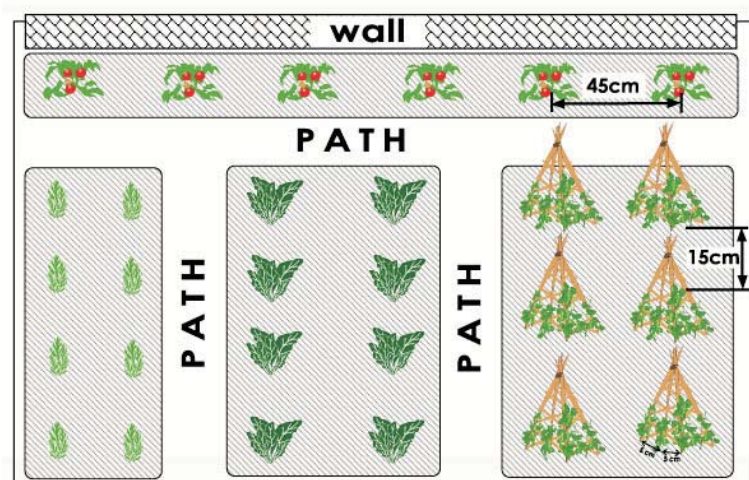


Examples of ground growing designs/plans

Example ground growing design/plan 1 (in rows, no walls)



Example ground growing design/plan 2 (planting by a wall)





Equipment Needed for Growing in the Ground

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A minimum of 1 modular seed tray per group = 4





ask families to bring in empty egg cartons -they are great for growing seeds in.

1 bag organic, peat-free multi-purpose compost for the modular seed trays

1 x 2ltr watering can with rose



When the plants are young you will can fill a bucket with water and ask the children to sprinkle water over the seedlings or newly transplanted plants using their hands. Alternatively you can collect plastic drink bottles and fit 'Bottle Top Waterers' to them - they make great mini watering cans for children to use. Bottle Top Waterers can be ordered at www.organiccatalog.com

1 large watering can (for more mature plants)

Bamboo Canes for supporting tomato plants (one for each plant)

For supporting peas you can either buy pea wigwams (1 wigwam will be fine for supporting 4/5 pea plants) or buy Spiral Canes (1 cane for each plant)



ask families or local allotment sites to give you some sturdy twigggy branches – they work just as well for supporting peas and tomatoes.

3x Pack Disposable Gloves



your school may already have these for other activities. If you do want to buy reusable gardening gloves for children you can buy these from some garden centres – this is better for the environment and a good idea if your school is planning to run growing activities regularly.

1 Fork and 1Trowel – for weeding and digging holes for transplanting

1 Fork & 1 Spade (large) – for digging over soil and removing large weeds

1x Hoe – for weeding

check in second hand shops for these items, or ask families to donate or lend them – make sure they are safe for children to use.

1 Bucket – to collect weeds/ transport compost

1 Ball Garden Twine – to mark out rows

1 Ball of string to tie tomatoes to canes

families may be able to donate these items



Check if your school has a contract with your local County Supplier – you may be able to order some equipment at special prices.

How to use the Printable ordering form

Decide the quantities of equipment that you need – the quantities selected are for a class of 30 children. If you don't want an item select the 'none' option on the menu beside the item.

Fax the form to your local B&Q (go to Store Finder at www.diy.com) or any other diy store/garden centre to get a quote.

If you are happy with the quote you can ask them to make an order up for you.

B&Q can offer you the option of having a Trade Card this means that you will be invoiced after you have placed the order so you won't need to visit the store. Check if your school already has a Trade Card or ask a member of staff at B&Q to send you an application form. Other stores may also offer this service.

Ask if the store will give you free delivery. Some stores will also offer gardening advice, so it is worth asking the Store Manager.

Please refer to the pdf equipment order form (container):
www.growinggrub.co.uk/ground/ground_growing_equipment.pdf


You are now ready to move onto Session One



Grow Your Own Grub

Session One *(Sowing Seeds)*

This first practical session can be started in spring time and consists of sowing the seeds into trays.

 We estimate the time needed is one hour for the classroom session. You will need 15 minutes per day to check and water the seeds.

Teacher's lesson plan

Divide your class into four groups; the children will stay in these groups for all three sessions. The four groups are the carrot group, pea group, spinach group and tomato group.

Each group will get to know their particular veg/fruit and will be responsible for looking after each plant. If there are not enough adults to supervise each group sowing their seeds at once then we advise:

Three groups can do an activity, (from one of the activity cards for instance), which is easier for one adult to supervise whilst the fourth group sows their seeds. Rotate the class so each group gets a chance to sow their seeds. We recommend you do not have more than two groups at a time doing the growing activity. Each group will have 15 minutes to sow their seeds. the growing activity. Each group gets 15 minutes to sow their seeds.

1. Introduce project to class – what the aims of the project are.
2. Discussion around how plants grow, what they need to grow etc
3. Explain information cards.
4. Explain the practical session – sowing the seeds
5. Explain the instruction cards
6. Plant care
7. Explain plant care cards
8. Use of activity cards if appropriate
9. Look at what next?

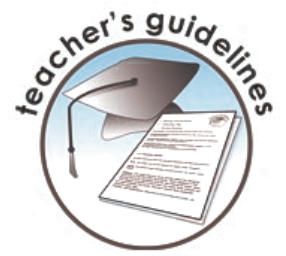
Teacher's guidelines

Introduce the project to your class:

"The aim of this project is to learn how easy it is for us to grow some of our own food and then make some tasty meals or snacks. This fits in with how important it is for us to eat at least five fruit and vegetables every day."



"We will be growing four different vegetables/fruit over the next few weeks; these will be carrots, spinach, peas and tomatoes. You will be divided into four groups and called the pea group, tomato group etc. Your group will be in charge of looking after your plants from sowing the seeds all the way through to picking them when they are ready to eat."



Discussion with class:

How plants grow, what they need e.g. compost, warmth, sunshine, water. Explain how each vegetable/fruit has its own characteristics which mean:

- This will affect the health benefits to us and that's why a variety of fruit and vegetables are good for us.
- How we grow each plant.

We will be growing four different vegetables/fruit over the next few weeks; these will be carrots, spinach, peas and tomatoes. You will be divided into four groups and called the pea group, tomato group etc. Your group will be in charge of looking after your plants from sowing the seeds all the way through to picking them when they are ready to eat."



Discussion with class:

How plants grow, what they need e.g. compost, warmth, sunshine, water. Explain how each vegetable/fruit has its own characteristics which mean:

- This will affect the health benefits to us and that's why a variety of fruit and vegetables are good for us.
- How we grow each plant.



Children's Information Cards (next page):

Work through the information cards for the children which give detailed information for each group so they can get to know their Veg/Fruit.

You could have a quiz at a later date to see who has learnt the most about their plant. ?



Carrot



This is a root vegetable which means it grows below the soil, pushing its way downwards

The bright orange colour tells you it is a great source of vitamin A

Vitamin A is good for your eyesight and keeps skin and hair healthy

They also contain vitamin C

They make a great snack. One medium carrot = 1 portion of five-a-day

Eat them raw, steamed or baked



Pea



Peas grow in a long and slightly curved green pod which is attached to a tall plant above the ground

When we take the peas from the pod we call this 'shelling' the peas

Peas contain Vitamin A and C and B1

A is good for our eyesight, C is good for skin, teeth and bones and B1 for a healthy nervous system

3 heaped tablespoons of peas = one 5-a-day portion



Spinach



This is a green, leafy vegetable which grows above the ground

We can pick the leaves off the plant to eat and it will grow new leaves for us!

Spinach is full of the vitamins A,B,C,K and it also has iron and calcium

'A' good for eyesight, 'B' for overall good health, 'C' for skin, teeth and bones, 'K' for healing wounds, iron for healthy blood and calcium for strong bones

Spinach is best steamed and not boiled

1 cereal bowl of spinach = one 5-a-day portion



Tomato



The tomato is actually a berry and therefore is a fruit

The tomatoes grow on the end of the green stalk part of the plant

Tomatoes are full of the vitamins A,C and E, they also have calcium in them

A is good for eyesight. C for skin, teeth and bones and E for healthy blood cells

Tomatoes can be eaten raw or cooked

7 small or three large tomatoes = one 5-a-day portion

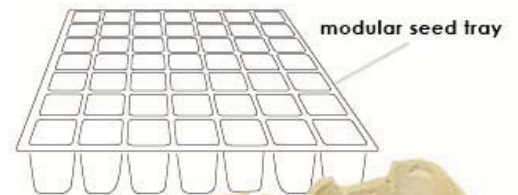
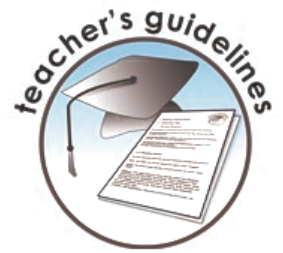


Teacher's seed sowing lesson plan

This first practical session involves sowing the seeds into trays and can be started in spring time.

Each of the four groups will need:

- A modular seed tray or children could bring in old egg cartons to use instead of plastic modular trays – this is a good example of recycling .
- Compost (soil)
- Seeds
- Watering cans
- Labels (it's easy to make your own using strips from plastic bottles)



modular seed tray



egg cartons are great as seed trays and promote recycling



Each group needs to place some fine and crumbly compost in their seed trays and fill all the modules until they are almost full and then press the compost down very lightly.

As each group may need to sow their seeds in a slightly different way there are four children's instructions cards which explain how to sow each vegetable/fruit seed.



Children's Instruction Cards (nextpage):



Carrot



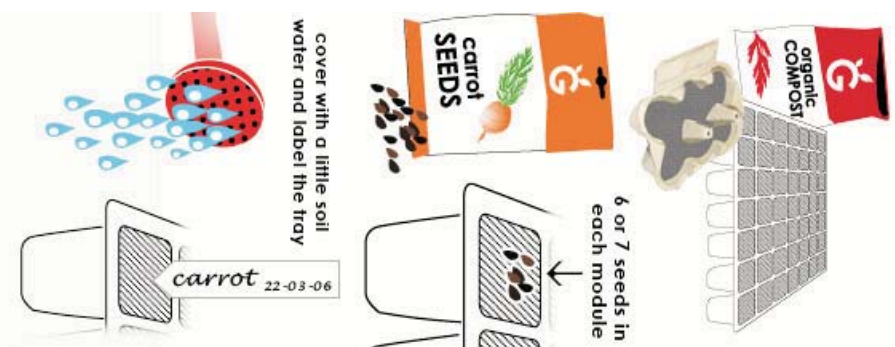
Put compost (soil) in the seed tray (or egg carton) and fill all the modules until they are almost full and then press the compost down very lightly

Put about six or seven seeds on top of the compost (soil) in each module

Cover the seeds very lightly with a little compost

Give the seeds a little water

Put your label in the tray with the name of the seed and the date that you sowed them



Pea



Put compost (soil) in the seed tray (or egg carton) and fill all the modules until they are almost full and then press the compost down very lightly

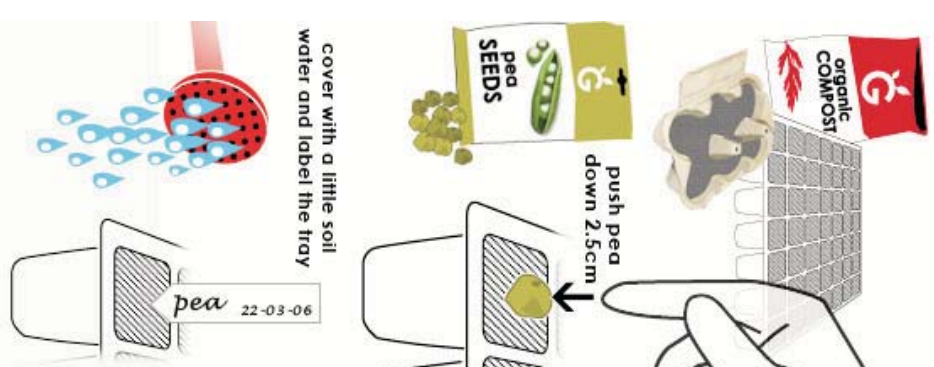
Place one pea into each module of the seed tray

Push the pea seed down into the soil up to your first finger joint (about 2.5 cm)

Cover the seed with a little more compost

Give the seeds a little water

Put your label in the tray with the name of the seed and the date that you sowed them



Spinach



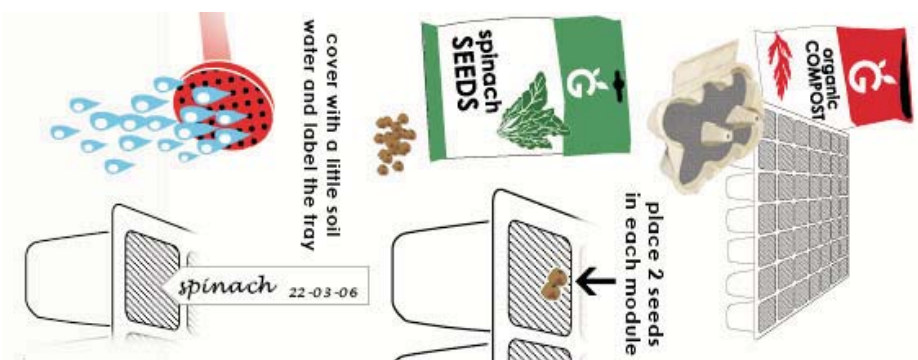
Put compost (soil) in the seed tray (or egg carton) and fill all the modules until they are almost full and then press the compost down very lightly

Place two seeds on top of the compost in each module

Cover the seeds very lightly with a little more compost

Give the seeds a little water

Put your label in the tray with the name of the seed and the date that you sowed them



Tomato



Put compost (soil) in the seed tray (or egg carton) and fill all the modules until they are almost full and then press the compost down very lightly

Put three seeds on top of the compost in each module

Cover the seeds very lightly with a little compost

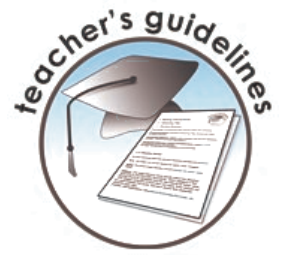
Give the seeds a little water

Put your label in the tray with the name of the seed and the date that you sowed them



Teacher's plant care notes

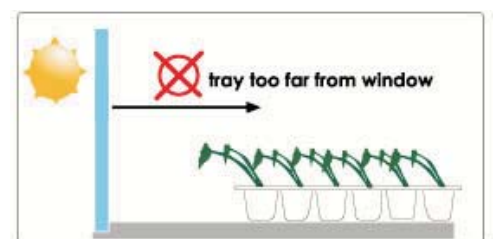
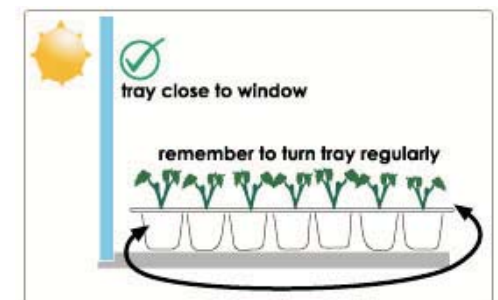
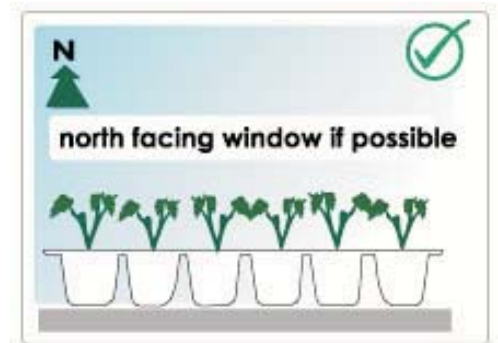
After the seeds have been sown the trays need to be put in a warm and light place but not where it gets too hot. A north-facing windowsill is good but if you do not have one put them somewhere where they will not have the sun shining directly on them and not on top of a radiator, (see diagram on right).



Pamper those Plants!

After care:

- Regularly check the trays, don't let them dry out too much and don't water them too much because the seeds will drown - the compost should be moist (damp) to the touch.
- When the seedlings start to grow they can often get 'leggy' as they look for the light, this means they grow quickly and the stem gets very thin and spindly and can barely stay upright. This can also happen if they are somewhere too warm. Try to remember to turn the trays regularly and ensure they get light during the day, (see diagram on right).
- When the plants grow over 5cm tall they can be placed outside during the day if the weather is not too windy and there is no heavy rain. This means the plants get some extra light and air and this will help to prevent 'legginess' and will get them used to being outside before being planted out in the second session.
- As each vegetable/fruit may have its own individual after-care needs a children's care card has been included for each group which they can use to look after their plants until Session Two.



Children's Care Cards (nextpage):



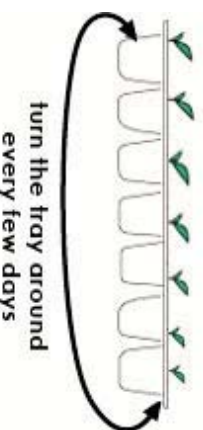
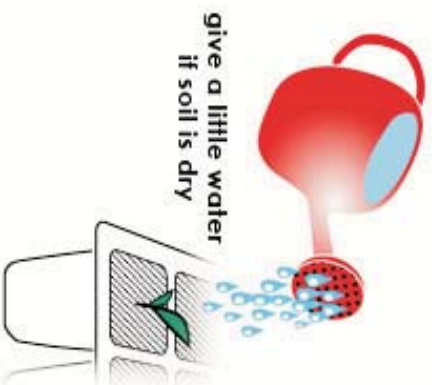
Carrot



If possible have a look at your tray of seeds every day

If the compost looks and feels dry give a little water to each module but if it is moist (damp) then leave and check again the next day

When the seeds start to grow and you can see the stems turn the tray around every few days



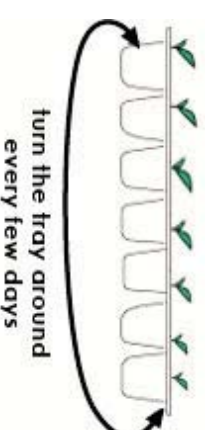
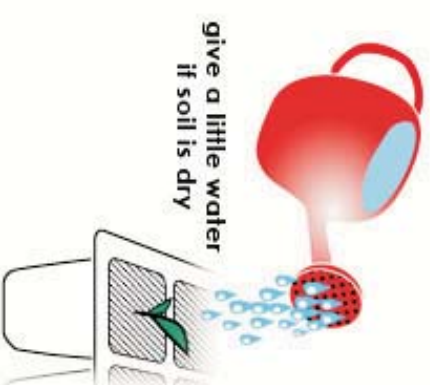
Pea



If possible have a look at your tray every day

If the compost looks and feels dry give a little water to each module but if it is moist (damp) then leave and check again the next day

When the seeds start to grow and you can see the stems then turn the tray around every few days



Spinach



If possible have a look at your tray every day

If the compost looks and feels dry give a little water to each module but if it is moist (damp) then leave and check again the next day

When the seeds start to grow and you can see the stems then turn the tray around every few days

You put 2 seeds into each module, once they have grown you need to reduce this to just one spinach seedlings per module

We do this by taking out the weaker seedling and leaving the strongest one in the module

The strongest spinach seedling will have a thicker stem and may be taller than the rest

You should be left with only one spinach plant per module

The seedlings which were removed can be put into a compost bin if you have one



Tomato



If possible have a look at your tray every day

If the compost looks and dry then give a little water to each module but if it is moist (damp) then leave and check again the next day

When the seeds start to grow and you can see the stems then turn the tray around every few days

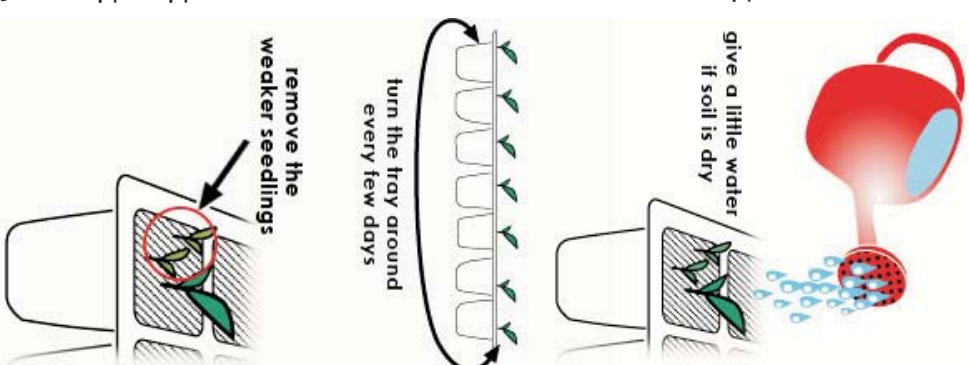
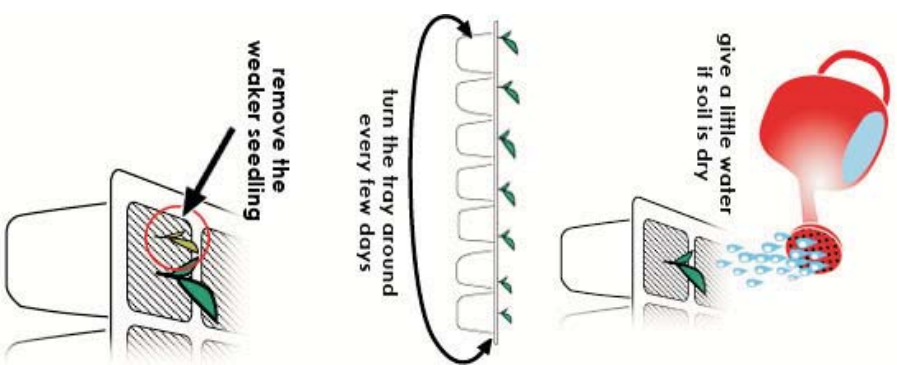
You put 3 tomato seeds into each module, once they have grown you need to reduce this to just one tomato plant per module

You do this by taking out the weaker seedlings and leaving the strongest one in the module

The strongest tomato seedling will have a thicker stem and may be taller than the rest

You should be left with only one tomato plant per module

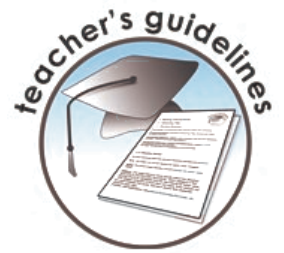
The seedlings which were removed can be put into a compost bin if you have one



Teacher's follow up notes to Session One

1. Keep an eye on the seed trays and follow the guidelines on the children's care cards for the care of each vegetable/fruit
2. Refer to progress timescale chart to monitor your progress
3. Schedule in the next Grow Your Own Grub session for about one months time. However you may need to be flexible about this – you may need to delay the session if the plants are not ready or if the weather is too bad or bring the session forward if the plants are ready to go outside.
4. Print off the invitation letter for parents about two weeks after Session One which invites them to the last session. (click to open letter)
5. If you need some gardening advice your school can get free advice from the HDRA (an organic gardening organisation) by joining them for free online at www.schoolsorganic.net Once you have joined you can call the advice line on 02476 308215 and get free advice from one of their experts.

6. We have provided some related activity cards which can be used between the sessions or for indoor work if the weather is bad and you have to delay the second session. These activities will show you how to produce fresh, nutritious foods from growing indoors! After the seeds have been sown the trays need to be put in a warm and light place but not where it gets too hot. A north-facing windowsill is good but if you do not have one put them somewhere where they will not have the sun shining directly on them and not on top of a radiator, (see diagram on right).



Children's Activity Cards (nextpage):



Fruit & Veg Word

search (easy)



S S N P E A S B W O C P A G K
 G P P A O T A E A S Z E T S P
 R U P G H B P S G N R D T S S
 A N M C N F P W E E A O M E R
 P A E E C E L A P H R N O P E
 E P D P E N E A S R C S A B P
 S V E S T A S L A D P A J E P
 X A W R E E L C E A A A E B E
 E E S C A O E E U R O E P P P
 M E L O N A N R O C T E E W S

WORD LIST

- | | | |
|---------|-----------|--------|
| APPLES | CARROTS | GRAPES |
| PEAS | MELON | SWEDE |
| PEACHES | SWEETCORN | BANANA |
| PEPPERS | | |



Fruit & Veg Word

search (hard)



A K P I E L P P A E N I P S C A B B A G E E O T R
 O E O O R E W O L F I L L U A C R N A N A N A B A T
 P A O Y R R E B W A R T S T G Q W P B E S A S R E
 T E P E A R A R R G A N L W O D E E R K W L E S S
 R K E C T O M A T O E S E T A E E A S W E D E O P
 E E L A L O T O P E E N J H M H S S O S B A A T B
 T N H S N E T S O G O C T A U B A O T S E L P P A
 R P R N T K I W I N N A I P S E G O S R P C D S S
 A E E O L I O C C O A U R L R H M W O O N M X O A K
 H P E A C H E S C R P R O I R P E P A P R K R E C
 R N R O S T L S B O F O C C O T A L S I I G S B E
 H S C E A A E S P V C T C O O M E O O R G A S B A
 A N W L H P P E P H B S O T M F A A I N C G T S E
 A E S U H R P L W S M N R S S A E G R A P E S E R
 S H C H L W R U G S P L B P E P P E R S N E I Y E

WORD LIST

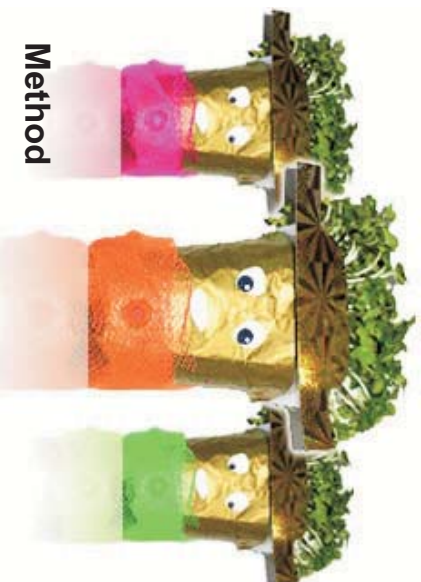
- | | | |
|------------|----------|-------------|
| STRAWBERRY | APPLES | SWEETCORN |
| CARROTS | PEAS | BANANA |
| GRAPES | MELON | PEPPERS |
| TOMATO | BROCCOLI | PINEAPPLE |
| ORANGE | PEAR | CAULIFLOWER |
| SWEDE | CABBAGE | KIWI |
| PEACHES | APRICOTS | MUSHROOMS |



Activity Card 3 Cress Head

One of the easiest things to grow is cress because it grows quickly and you don't even need any soil to grow it in!

A simple idea to make growing cress fun is by making a cress head:



Method

- Wash the yoghurt pot and either paint or cover in paper.
- Glue on some eyes, a nose and a mouth to make a face.
- Wet some scrunched-up kitchen roll and push this into the pot followed by a thin damp layer of cotton wool, leaving a gap of about 2cm below the top of the pot.
- Sprinkle the cress seeds on top of the cotton wool, pressing them down lightly.
- Leave the pot in a warm light place, check that the cotton wool remains damp and add a little water if necessary. Look daily for signs of growth, which should happen after about 7 days.
- When the cress is fully grown (when it has green leafy tops) it can be cut and eaten straight away or you could put some in a sandwich or in a salad.



You will need:

- A packet of cress seeds
- Used yoghurt pots
- Kitchen roll
- Cotton wool

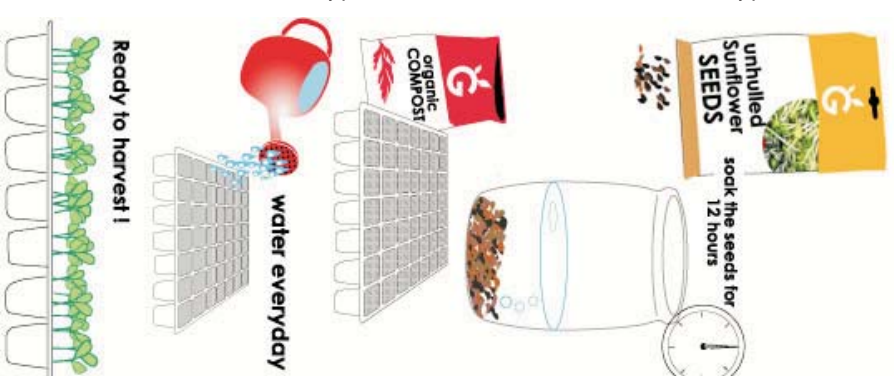


Activity Card 4

Sunflower Greens

Sunflower Greens are more nutritious than lettuce and cheaper too!

- Buy some unhulled sunflower seeds (most health shops stock them or they can be bought from B&Q or other DIY stores).
- Place one cup of seed in a jar and soak in water for 12 hours.
- Rinse and drain and leave the seed to sprout for 1 day.
- Fill a modular tray with compost (soil) and water the soil so it is damp.
- Place seeds on top of the compost close together - so they are touching but not on top of each other.
- Cover with a thin layer of compost.
- Water every day to make sure that the compost stays damp.
- After 7 days the seeds will have grown and produced two leaves; this means they are ready to harvest.
- They can be cut with scissors, washed and eaten!
- You can compost the leftovers, it makes good quality soil!
- This can be repeated throughout the year.

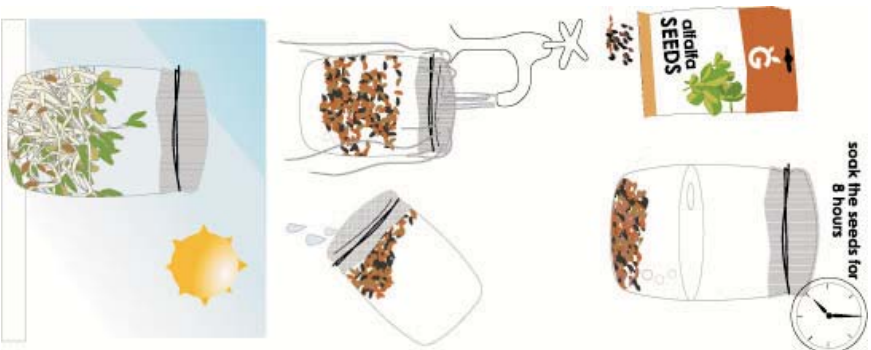


Seed Sprouting

Sprouted grains, nuts and seeds are 'super foods' because they contain many of the nutrients we need to keep us healthy.

Many different nuts, grains and seeds can be sprouted, but here we show how to sprout alfalfa which is a complete food. This means it contains all the vitamins and minerals we need.

1. Buy some alfalfa seeds (most health shops sell them or buy them from B&Q or other DIY stores)
2. Place the seed into a large jar and fill with water.
3. Cover the jar with muslin cloth or nylon mesh and secure with a rubber band.
4. Soak the seed for 8 hours.
5. Drain the water off (by tipping the jar) and wash under a tap really well and drain again. This gets rid of the wild yeasts which may be present.
6. Place the jar in a warm room, but not on a sunny windowsill or radiator as this will be too hot.
7. Rinse and drain the sprouting seeds once a day until they are ready. This takes between 2 and 5 days. If it is very hot they will need to be rinsed twice a day.
8. When they are ready just eat them fresh! Buy some unhulled sunflower seeds (most health shops stock them or they can be bought from B&Q or other DIY stores).



Now follow on to Session Two of either Container Growing or Ground Growing



Grow Your Own Grub

Container Growing

Session Two *(Transplanting)*



In this session you will be moving your seedlings outside to their new homes.



We estimate the time needed is one hour for the classroom session and 15 minutes per day to check the plants outside and water/weed them if necessary.

Teacher's Lesson Plan for Session Two

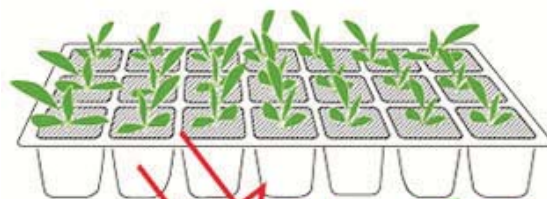
Divide your class into their four groups. Each group will be transplanting their plants in this session and discussing what they may like to eat in the final session. We suggest that two groups be supervised outside planting whilst two groups are supervised inside preparing recipes using the classroom activity cards -after 30 minutes the groups can swap activities. If you do not have enough staff to supervise two groups transplanting at the same time, use the same structure as Session One where one group at a time goes outside.

1. Introduce second session – transplanting & recipe planning
2. Discuss what care the plants will need outdoors
3. Discuss the planning of recipes for the final session
4. Explain the information cards (more facts about the fruit/veg)
5. Explain instruction cards
6. Practical Session – transplanting the seedlings
7. Explain plant care cards
8. Explain invitation letter to parents for final session

Teacher's guidelines

Introduce the second session:

In this session you will be doing what is called 'transplanting' - 'transplanting' simply means moving our plants from one place to another.



Grow Your Own Grub Project Session Two

“Your seeds should now have grown enough to be ready to be moved to their new home. You need to plant them somewhere with more space as they will not be able to grow as big as they need to if we keep them in the seed trays. You transplant them by very carefully removing them from the seed tray and planting them into their containers outside .”

“ In the last session of this project you will get a chance to taste some of the food you have grown so you need to think about how you would like to do this e.g. eat them raw or in a simple dish.”

Discussion with class:

“What do your plants need now they have been transplanted?”

Water, warmth, sunshine, weeding - this information is contained in the care cards for each group.

“This second session also includes preparation for the final session when the food-tasting takes place. On that day we will be eating our five fruit and vegetables from the plants that we have grown! Using the classroom activity cards you will be thinking up some meals or snacks that you might like to eat.”

Explain to the class that their parents will be invited to join the third session and take part in the harvesting and food-tasting.

Children's Session Two Information Cards: (next page)

Introduce the information cards to the children - they include some more interesting facts about their vegetable/fruit so they can get to know them better!



Carrot



Carrots are members of the parsley family which also includes parsnips, celery and the herbs fennel and dill

The edible root can be orange, purple, maroon, yellow or white

Carrots were first grown in Afghanistan

They were brought to the Mediterranean area more than 2,000 years ago

The typical carrot we see today came from carrots grown in Holland



Pea



Green peas are a member of the legume family which includes peas and beans

Archaeologists have found dried peas in Egyptian tombs

About $\frac{3}{4}$ of a cup of peas has more protein than a whole egg

There are some types of pea where you can eat the pod as well; these are called mangetout which means 'eat it all' in French



Spinach



Spinach was probably first grown in Southwest Asia or the western Himalayas

It was first brought to Europe in the 15th Century by Persian Arabs who gave it its name

There are three different types of spinach:

1. Curley Savoy which has curly leaves
2. Flat leaf which has flat leaves
3. Semi-Savoy which has slightly curly leaves



Tomato



Tomatoes are from the same family as the potato, peppers and aubergines

Tomatoes originally come from South America where they grow in the wild

Tomatoes were first brought to Europe in the 16th Century

Tomato seedlings have even been grown in outer space

There are thousands of different types of tomatoes, including yellow ones



Grow Your Own Grub Project Session Two

Teacher's transplanting lesson plan

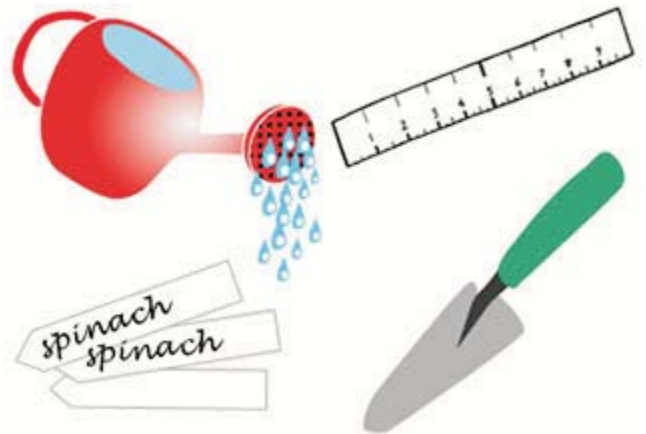
This practical session is about recognising whether the children's seedlings are ready to be planted outside, how to move them from the tray to their containers outside and how to plant each fruit/vegetable according to its own individual needs.

Each group will need:

- * Trowels
- * Watering cans
- * Ruler
- * Labels

As each group will need to look for different signs for when their seedlings are ready and will need to plant them differently according to their varying needs we have provided children's instructions cards for each group. Work through the instructions on each of the cards

Children's Session Two Instruction Cards (next page)

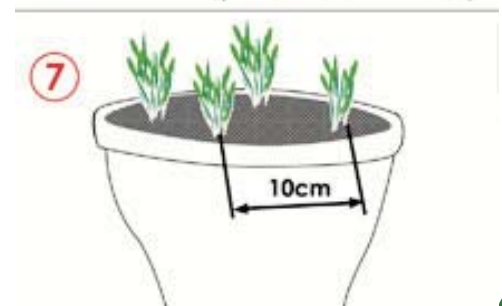
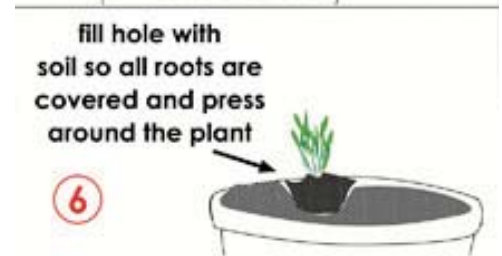
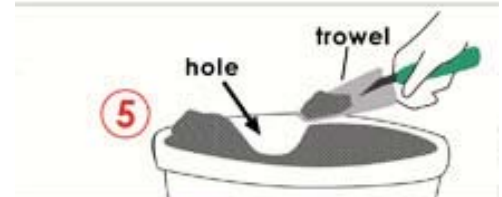
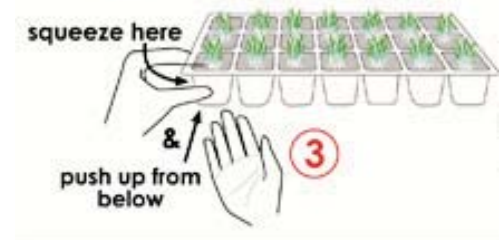


Carrot



Transplanting your Carrot plants

1. When the plants are about 3cm high they are ready for planting outside.
2. Take them outside and water them well.
3. Push from the bottom of the module up to ease the compost and plants out of the module.
4. You should see the roots of the plant holding the compost together.
5. In your container make a hole big enough to plant the clump of carrots into.
6. Place the clump of carrots in the hole and fill the hole with soil. Press the soil down around the clump of carrots.
7. You can fit about four clumps in a 5 litre pot. If the pot is bigger you can fit more clumps in as long as there is about 10cm between each clump.

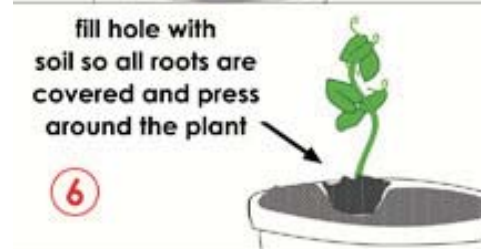
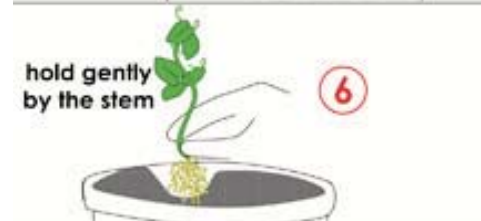
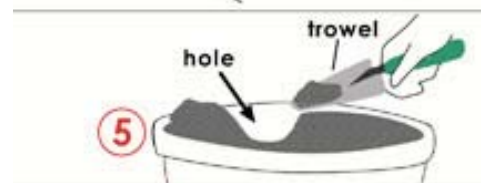
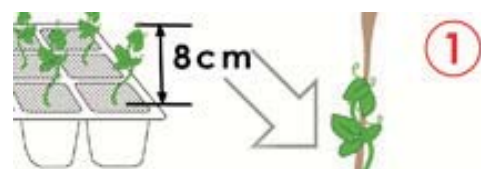


Pea



Transplanting your Pea plants

1. When the plants are about 8cm high they are ready for planting outside.
2. Take them outside and water them well.
3. Push from the bottom of the module up to ease the compost and plants out of the module.
4. You should see the roots of the plant holding the compost together.
5. Make a hole big enough to plant the pea plant in your container.
6. Place the pea plant into the hole and fill the hole with soil. Press the soil down around the plant.
7. You can fit about four pea plants and sticks in a 5 litre pot. If the pot is bigger you can fit more plants in as long as there is about 10cm between each plant.

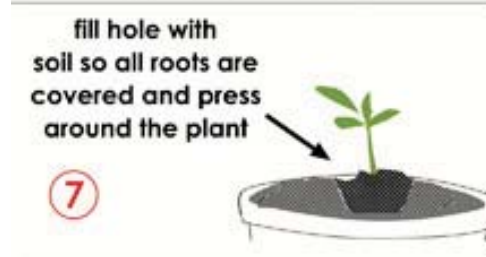
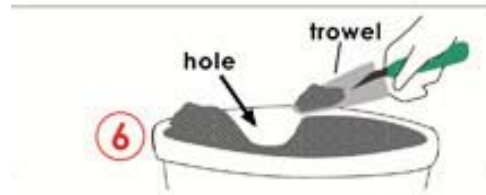
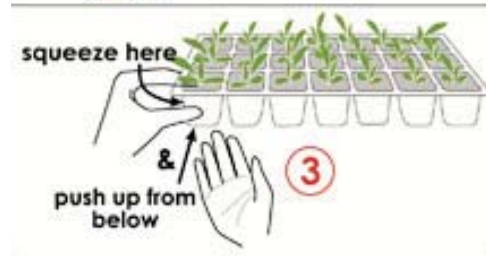
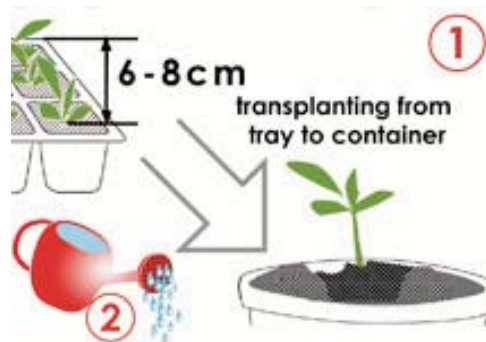


Spinach



Transplanting your Spinach plants

1. When the plants are about 5-7cm high they are ready for planting outside.
2. Take them outside and water them well.
3. Push from the bottom of the module up to ease the compost and plants out of the module.
4. You should see the roots of the plant holding the compost together.
5. It is best to plant Spinach in a place where it will get some shade to stop it 'running to seed' which means it will grow too quickly and produce seeds before you have a chance to harvest the leaves.
6. Make a hole big enough to plant the spinach plant in your container.
7. Place the spinach plant into the hole and fill the hole with soil. Press the soil down around the plant.
8. You can fit about four spinach plants in a 5 litre pot. If the pot is bigger you can fit more plants in as long as there is about 10cm between each plant.

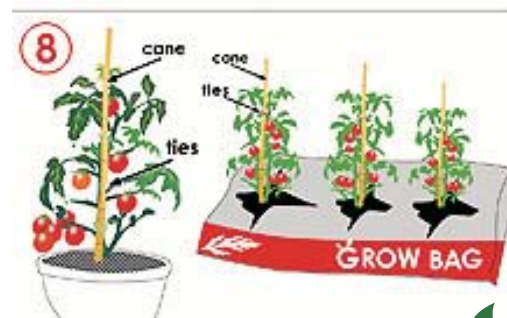
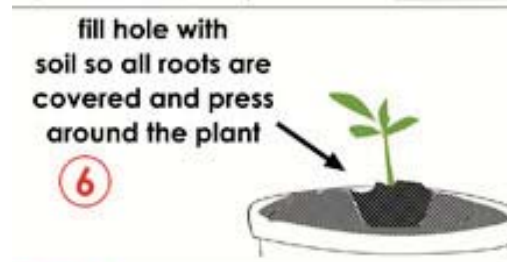


Tomato



Transplanting your Tomato plants

1. When the plants are about 10cm high they are ready for planting outside.
2. Take them outside and water them well.
3. Push from the bottom of the module up to ease the compost and plants out of the module.
4. You should see the roots of the plant holding the compost together.
5. Make a hole big enough to plant the tomato plant in your container.
6. Place the tomato plant and fill the hole with soil. Press the soil down around the plant.
7. Place a cane in the soil beside the plant. The cane needs to be about 1.2m high. Loosely tie the plant to the cane with soft string.
8. It is best to plant one tomato plant in a 5 litre pot (although a larger pot would be better) or three tomato plants in one grow bag.



Teacher's plant care notes

Pamper those Plants!

After all the seedlings have been transplanted they will need some follow-up care. They will need regular watering and weeding, but again each plant will have some special requirements so we have included some children's care cards for each group.

Children's Session Two Care Cards

You will need to keep an eye on the weather – if it's very hot the children should water their plants everyday, if not every other day is fine.



Session Two Care Card

Carrot

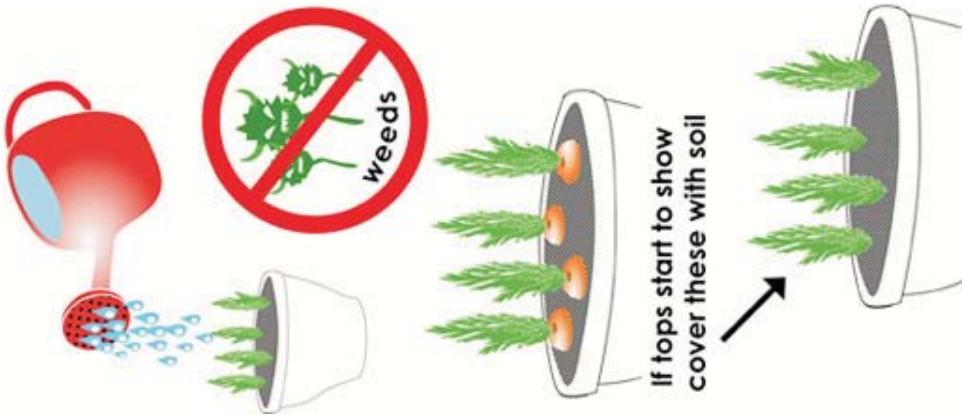


Your carrot plants will need to be watered every two days but if the weather is very hot water them every day.

Keep your carrots free of weeds - weeds are any other plant which grows near your carrot plants which aren't the carrot plant!

As the carrots begin to swell in the container you may see the tops of them poking out of the soil, cover these with soil to stop the top of the carrots going green.

Covering the tops will also help to stop the carrot fly which is a common pest of carrots.



If tops start to show cover these with soil



www.growinggrub.co.uk

Pea



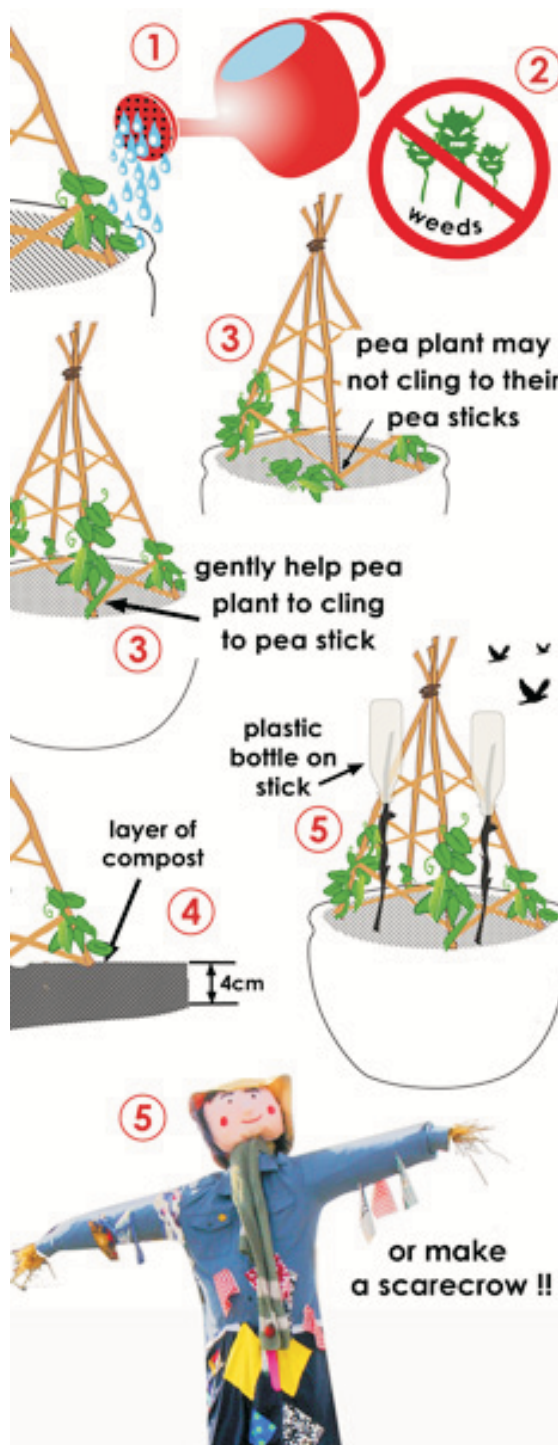
1. Your peas will need lots of water, especially when the first flowers appear and when the first 'pods' form. Water them well every two days but if the weather is very hot water them every day.

2. Keep your peas free of weeds - weeds are any other plant which grows near your pea plant which isn't the pea plant!

3. As the pea plants grow make sure they are clinging to their peas sticks and climbing their way up them. If they need help gently move the pea plant towards the pea stick.

4. If you have any compost left put it around the bottom of the plant, about 4cm thick.

5. Birds can be scared away to stop them pinching your peas – put some sticks in the ground with plastic bottles on top which rattle in the wind or make a scarecrow (both are good ways of recycling some rubbish).



Spinach



Your spinach plants will need to be watered every two days but if the weather is very hot water them every day.

Keep your spinach plants free of weeds - weeds are any other plant which grows near your spinach which isn't the spinach plant!

If you have any compost left put it around the bottom of the plant, about 2/3 cm thick.

Watch out for slugs on your seedlings, see the Slug Action Plan (in Extras) to find out how to get rid of slugs without harming them or using chemicals.

Spinach plants may attract aphids which are tiny creatures which feed off the plant and can make the leaves to go yellow. If you see aphids these can be sprayed off using a powerful spray of water.



Session Two Care Card

Tomato



1. Your tomato plants will need to be watered every two days but if the weather is very hot water them every day.

2. Keep your tomato plants free of weeds - weeds are any other plant which grows near your tomatoes which isn't the tomato plant!

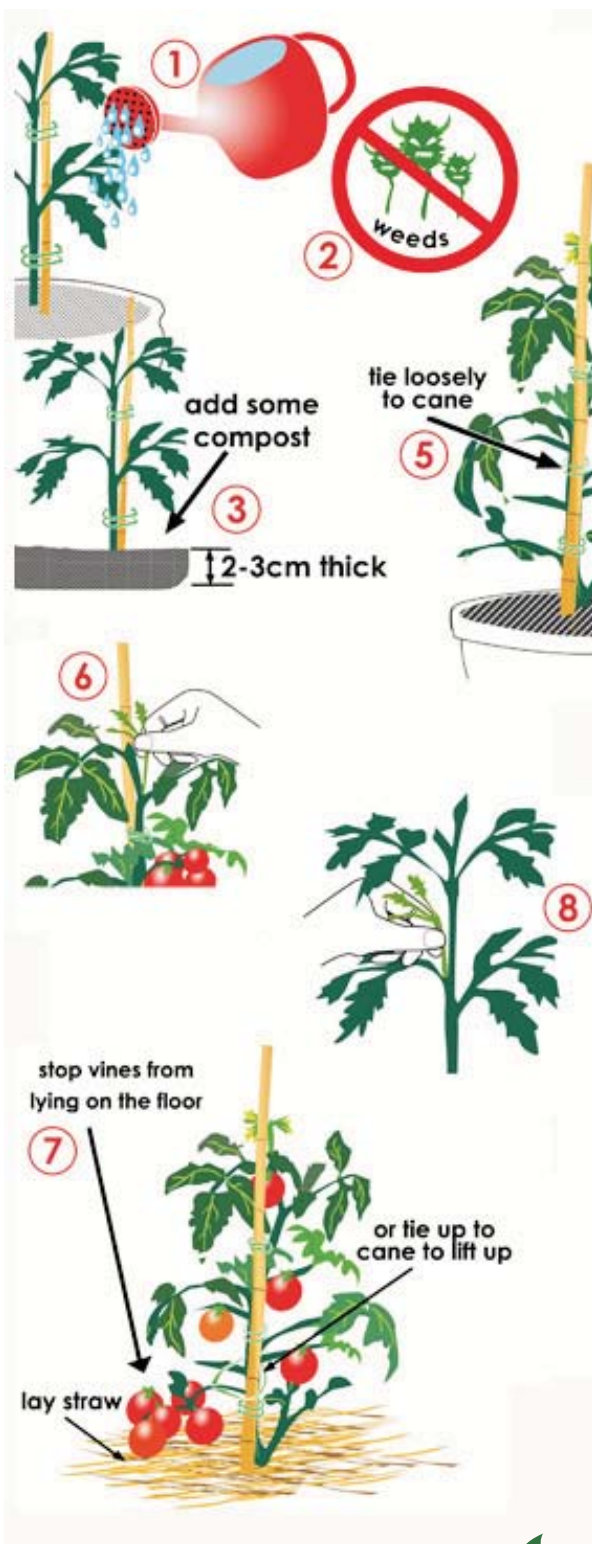
3. If you have any compost left put it around the bottom of the plant, about 2/3 cm thick.

4. Watch out for slugs on your seedlings, see the Slug Action Plan (in Extras) to find out how to get rid of slugs without harming them or using chemicals.

5. As the plants grow taller keep tying them loosely onto their canes so they don't fall over.

6. When the plant has formed three or four 'tresses' - clusters of fruit, pinch off the top of the plant to stop any more tresses forming. This makes sure that you won't get lots of unripe green tomatoes and instead the plant's energy goes into making lovely ripe tomatoes.

7. Make sure the tomatoes are kept off the soil – tie them to the cane or put straw under them.



Grow Your Own Grub Project Session Two

Teacher's follow up notes to

Session Two

What next? Planning for Session Three

We have included some suggestions for activities which could be suitable for the weeks between Sessions Two and Three. Activity Cards 6,7 & 8 will encourage children to think about where our food comes from, how far it has travelled to be on our plates, and how it is that we can get some foods all year round when they are out of season in our country.

Activity card 9 asks children to think about meals or snacks for Session Three which is all about food-tasting! In between the second and third sessions the children could work on their plans for the final session. The session can be about trying the food in its raw state, as many children have not eaten raw vegetables, or preparing a simple meal or snack such as a salad or sandwich. It can also include how to present the food in an attractive way - its amazing how artistic we can be with food! This work is to emphasise the importance of healthy food.

To help with the planning for Session Three here are some suggestions:

1. Send a letter to parents inviting them to Session Three:

[www.growinggrub.co.uk/session1/Session one Parents Invite Letter.pdf](http://www.growinggrub.co.uk/session1/Session%20one%20Parents%20Invite%20Letter.pdf)



Grow Your Own Grub Project Session Two

2. Check the progress of the plants; if it looks like they will not be ready in time for the third session then you may need to buy some tomatoes, spinach, peas and carrots to show what their plants will eventually grow into.

3. Use the Activity Card 9 to get some ideas of what to prepare for the last session.

4. For schools in Portsmouth some resources may be available from the city council to use for the food-related games.

http://www.growinggrub.co.uk/extras/extras_frameset_02.htm

5. Check availability of food preparation area in your school if appropriate

Children's Session Two Instruction Cards (next page)

Related activities which can be done during this session or at any other time:



Food Seasons Game



Here is a list of fruit and vegetables that we can grow in the UK. Match up each food to the season it grows in.

Type of Food	Season
Apple	
Strawberry	Spring
Blackberry	
Carrot	Summer
Cucumber	
Tomato	
Peas	Autumn
Spinach	
Mushroom	Winter
Brussel Sprout	
Cabbage	
Lettuce	All year round
Green or Runner bean	

Teacher's Explanation

This game emphasises that food is seasonal and although we can buy many foods all year in supermarkets this was not always possible. It is better for the environment if we buy food in season and where possible from our own country. Points of interest – Blackberries grow in the wild very easily, brussel sprout are eaten at Christmas because they are one of the vegetables that grow in the winter. Some foods grow all year round such as mushrooms and different types of cabbage and some can be stored so we can eat them out of season such as carrots and apples.

Answers can be found in the Teacher's Answer Card at the end of the session.



Activity Card 7

Food Miles Game



Some of the foods that we buy are flown thousands of miles to be in our shops when they often grow in our own country! Whenever possible we should try to buy food which has been grown close to where we live to reduce pollution caused by food being flown long distances around the world. Match these foods (which can all be grown in the UK) with the country you think they may have come from.

Type of Food

Apple

Strawberry

Blackberry

Carrot

Tomato

Peas

Spinach

Green bean

Country

South Africa

Argentina

Spain

Mexico

Kenya

Guatemala

USA

Morocco

Teacher's Explanation

It would be good to have an atlas or a map for the children to use to illustrate how far some produce has travelled to be in our shops even though it grows in the UK in season – refer back to Activity Card 6. Identify which food has travelled the furthest distance and what this means for the environment. Explain that carrots are the only food on the list that was grown in the UK.

For further resources on food miles and food and the environment see the Oxfam 'Cool Planet' website and the Soil Association Education Resources – details in our Useful Resources Section.

Answers can be found in the Teacher's Answer Card at the end of the session.



Activity Card 8

Food Miles Game



Next time you go shopping for food with your family look at the labels on each of the items listed below to see where they have come from.

Name of Shop :

Item	Country of Origin (Where it was grown)
Apple
Strawberry
Blackberry
Carrot
Tomato
Peas
Spinach
Green bean

Teacher's Explanation

If this activity is given as a simple piece of homework before the classroom session, the class (or the four groups) can work through the topic of 'food miles' – how far food has travelled from around the world to be in our supermarkets and the environmental damage this causes. You will be able to draw on the issues covered in Activity Cards 6 & 7 which are designed to make the class aware that a lot of this food can be grown in this country where it will taste better and be less damaging to the environment.

There are some great classroom resources available that cover this topic in detail. See the section on Food and the Environment in the Further Resources Section of this site.



Recipe Planning



Creating Recipes for Session 3

You can use this card before Session 3 to encourage the children to think about what they would like to make with their crops in the food-tasting session. If you have any extra money you could buy some other fruits and vegetables that the children have chosen to go with their home grown ones.

In a class discussion or asking each child or group to write down answers discuss the following:

1. Ask the children to think about how they would like to eat the crops they have grown, for instance do they want to try them raw or cook with them?

Have they tried each of the four vegetables before?

Which is their favourite vegetable out of the four?

With a piece of paper with the shape of a plate drawn on it ask the children to make a colourful design of how the four vegetables could look together on the plate – for example they could draw and colour in a face shape or animal/plant design or anything they like.

There are some great classroom resources available that cover this topic in detail. See the section on Food and the Environment in the Further Resources Section of this site.



Session 2 Activity Cards Answers



Food Seasons Game (Activity Card 6)

(Answers: key = s – spring, su – summer, a – autumn, w – winter, ayr – all year round. apples – a/w, strawberry – su, blackberry – su, carrot – su/a/w, cucumber – su, tomato – su, peas – su, spinach – su/a/w, mushroom – ayr, brussel sprout – w, cabbage – ayr, lettuce – ayr, green/runner bean – su)

Food Miles Game (Activity Card 7)

(Answers: apple – South Africa, USA, Argentina, Strawberry – Spain, Blackberry – Mexico, Green Bean – Kenya, Morocco, Tomato – Spain, Spinach – Spain, Peas – Guatemala, Carrots – UK!)



Grow Your Own Grub

Ground Growing

Session Two *(Transplanting)*



In this session you will be moving your seedlings outside to their new homes.



We estimate the time needed is one hour for the classroom session and 15 minutes per day to check the plants outside and water/weed them if necessary.

Teacher's Lesson Plan for Session Two

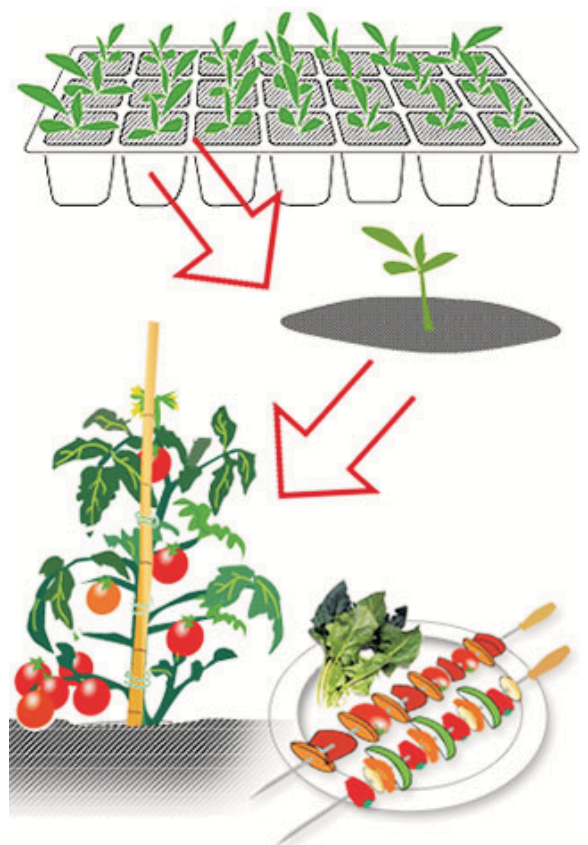
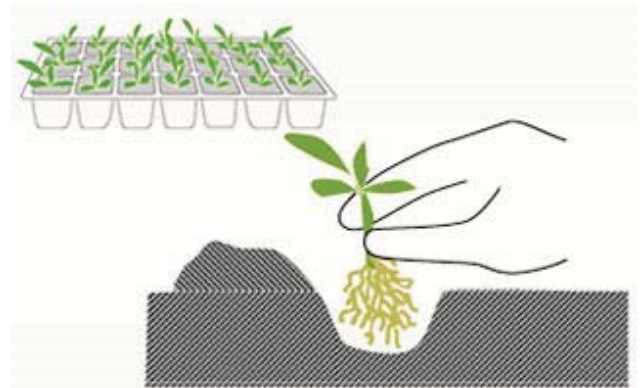
Divide your class into their four groups. Each group will be transplanting their plants in this session and discussing what they may like to eat in the final session. We suggest that two groups be supervised outside planting whilst two groups are supervised inside preparing recipes using the classroom activity cards -after 30 minutes the groups can swap activities. If you do not have enough staff to supervise two groups transplanting at the same time, use the same structure as Session One where one group at a time goes outside.

1. Introduce second session – transplanting & recipe planning
2. Discuss what care the plants will need outdoors
3. Discuss the planning of recipes for the final session
4. Explain the information cards (more facts about the fruit/veg)
5. Explain instruction cards
6. Practical Session – transplanting the seedlings
7. Explain plant care cards
8. Explain invitation letter to parents for final session

Teacher's guidelines

Introduce the second session:

In this session you will be doing what is called 'transplanting' - 'transplanting' simply means moving our plants from one place to another.



Grow Your Own Grub Project Session Two

“Your seeds should now have grown enough to be ready to be moved to their new home. You need to plant them somewhere with more space as they will not be able to grow as big as they need to if we keep them in the seed trays. You transplant them by very carefully removing them from the seed tray and planting them into the soil outside”

“In the last session of this project you will get a chance to taste some of the food you have grown so you need to think about how you would like to do this e.g. eat them raw or in a simple dish.”

Discussion with class:

“What do your plants need now they have been transplanted?”

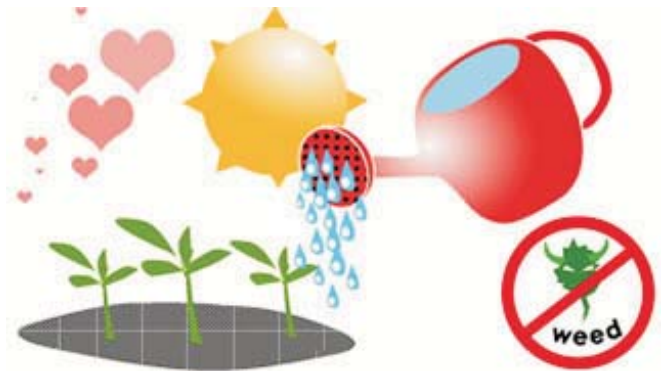
Water, warmth, sunshine, weeding - this information is contained in the care cards for each group.

“This second session also includes preparation for the final session when the food-tasting takes place. On that day we will be eating our five fruit and vegetables from the plants that we have grown! Using the classroom activity cards you will be thinking up some meals or snacks that you might like to eat.”

Explain to the class that their parents will be invited to join the third session and take part in the harvesting and food-tasting.

Children's Session Two Information Cards: (next page)

Introduce the information cards to the children - they include some more interesting facts about their vegetable/fruit so they can get to know them better!



Carrot



Carrots are members of the parsley family which also includes parsnips, celery and the herbs fennel and dill

The edible root can be orange, purple, maroon, yellow or white

Carrots were first grown in Afghanistan

They were brought to the Mediterranean area more than 2,000 years ago

The typical carrot we see today came from carrots grown in Holland



Pea



Green peas are a member of the legume family which includes peas and beans

Archaeologists have found dried peas in Egyptian tombs

About $\frac{3}{4}$ of a cup of peas has more protein than a whole egg

There are some types of pea where you can eat the pod as well; these are called mangetout which means 'eat it all' in French



Spinach



Spinach was probably first grown in Southwest Asia or the western Himalayas

It was first brought to Europe in the 15th Century by Persian Arabs who gave it its name

There are three different types of spinach:

1. Curley Savoy which has curly leaves
2. Flat leaf which has flat leaves
3. Semi-Savoy which has slightly curly leaves



Tomato



Tomatoes are from the same family as the potato, peppers and aubergines

Tomatoes originally come from South America where they grow in the wild

Tomatoes were first brought to Europe in the 16th Century

Tomato seedlings have even been grown in outer space

There are thousands of different types of tomatoes, including yellow ones



Grow Your Own Grub Project Session Two

Teacher's transplanting lesson plan

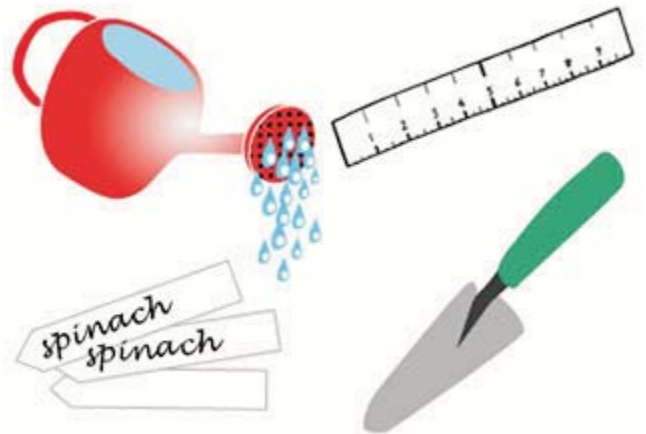
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- * Watering cans
- * Ruler
- * Labels

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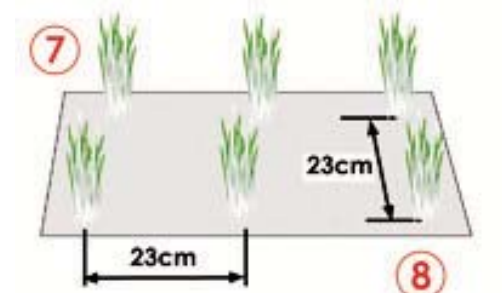
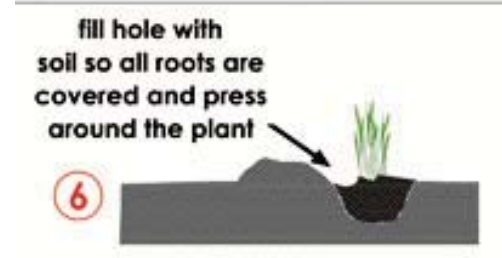
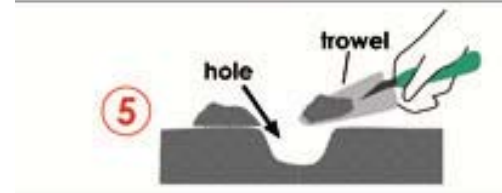
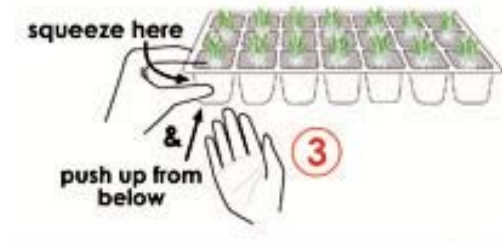
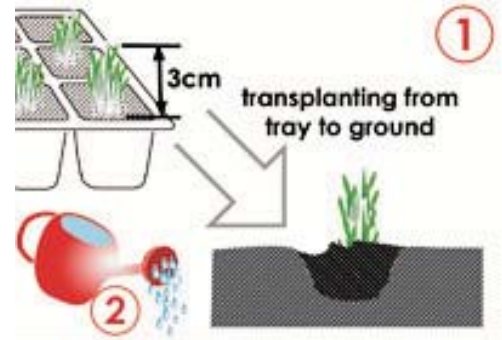


Carrot



Transplanting your Carrot plants

1. When the plants are about 3cm high they are ready for planting outside.
2. Take them outside and water them well
3. Push from the bottom of the module up to ease the compost and plants out of the module.
4. You should see the roots of the plant holding the compost together.
5. Make a hole that is wide and deep enough to plant the clump of carrots in.
6. Place the clump of carrots in the hole and fill the hole with soil. Press the soil down around the clump of carrots.
7. Measure the next hole so it is 23cm away from the first one and continue until you have planted a row, the row can be as long or as short as you like.
8. If you want to plant another row then start it at least 23cm from the first row.

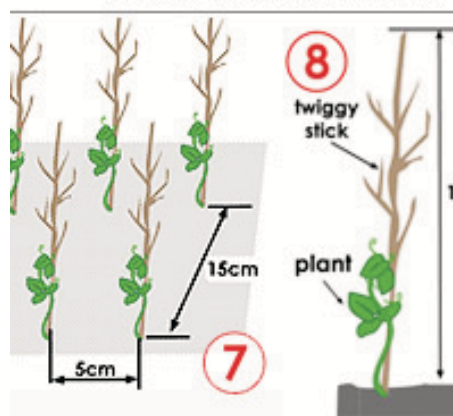
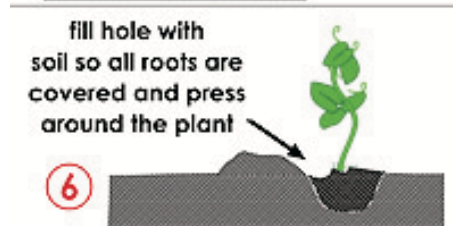
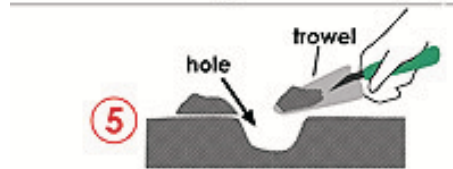
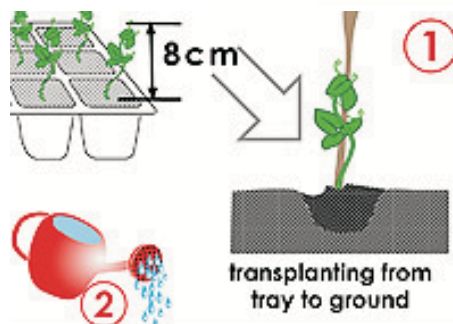


Pea



Transplanting your Pea plants

1. When the plants are about 8cm high they are ready to plant outside.
2. Take them outside and water them well.
3. Push up from the bottom of the module to ease the compost and plants out of the module.
4. You should see the roots of the plant holding the compost together.
5. Make a hole wide and deep enough to plant the pea plant in.
6. Place the pea plant in the hole and fill the hole with soil. Press the soil down around the pea plant.
7. Plant the rest of the peas so they are 5cm apart, if you are planting another row make sure the rows are at least 15cm apart.
8. Once all the peas have been planted then push a pea stick into the ground next to each plant. Pea sticks need to be about 1.2m tall and it is best if they can be 'twiggy' as this makes it easier for the pea plants to get hold of the stick.

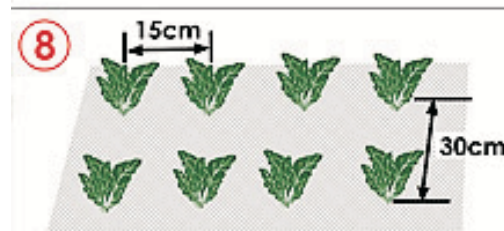
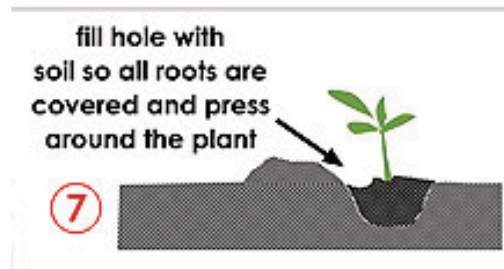
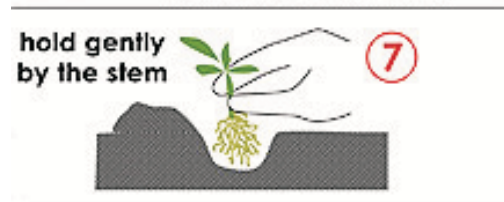
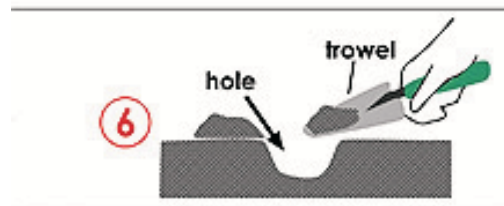
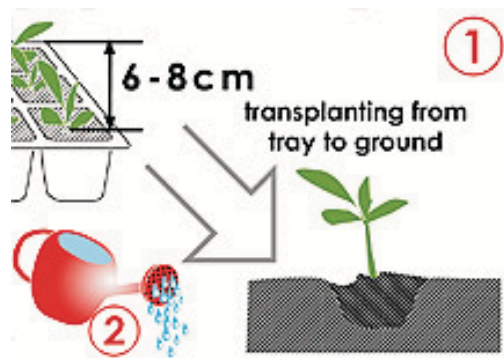


Spinach



Transplanting your Spinach plants

1. When the plants are 6 – 8 cm tall they are ready to plant outside.
2. Take them outside and water them well.
3. Push from the bottom of the module up to ease the compost and plants out of the module.
4. You should see the roots of the plant holding the compost together.
5. Spinach is best planted where it will get some shade to stop them 'running to seed' which means they grow very quickly and produce their seed before you have a chance to 'harvest' or pick the leaves.
6. Make a hole wide and deep enough to plant the spinach plant in.
7. Place the spinach plant in the hole and fill in the hole with soil. Press the soil down around the spinach plant.
8. Plant the rest of the spinach plants 15cm apart. If you are planting more rows make sure they are at least 30cm apart.

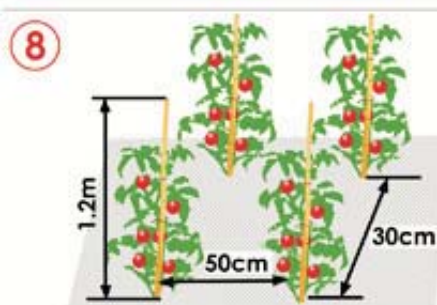
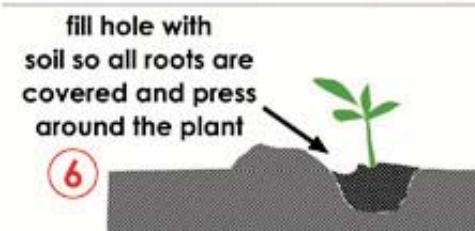
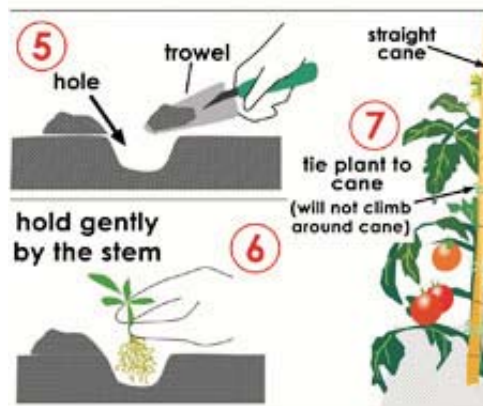
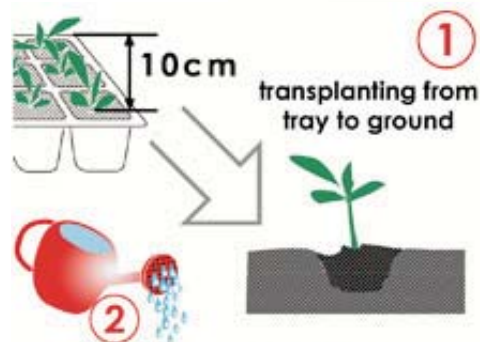


Tomato



Transplanting your Tomato plants

1. When the plants are about 10cm high they are ready to plant outside, (they can be a bit smaller or larger than this).
2. Take them outside and water them well.
3. Push up from the bottom of the module to ease the compost and plants out of the module.
4. You should see the roots of the plant holding the compost together.
5. Make a hole wide and deep enough for the tomato plant.
6. Place the tomato plant in the hole and the hole with soil. Press the soil down around the tomato plant.
7. Place a stick or cane into the ground beside the plant. The stick needs to be about 1.2m high. Loosely tie the plant to the cane with soft string.
8. If you have the room, plant the remaining tomato plants so they are about 50cm apart, if you don't have a lot of space then the minimum they can be spaced is 30cm apart.



Teacher's plant care notes

Pamper those Plants!

After all the seedlings have been transplanted they will need some follow-up care. They will need regular watering and weeding, but again each plant will have some special requirements so we have included some children's care cards for each group.

You will need to keep an eye on the weather – if it's very hot the children should water their plants everyday, if not every other day is fine.



Children's Session Two Care Cards



Session Two Care Card

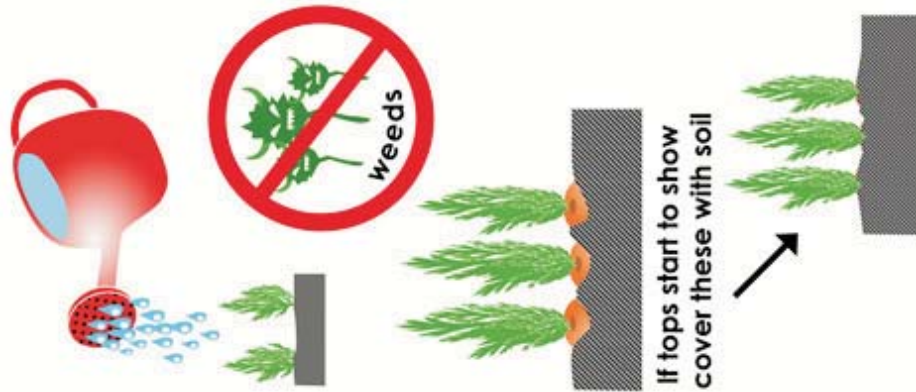
Carrot

Your carrot plants will need to be watered every two days but if the weather is very hot water them every day.

Keep your carrots free of weeds - weeds are any other plant which grows near your carrot plants which aren't the carrot plant!

As the carrots begin to swell in the ground you may see the tops of them poking out of the ground, cover these with soil to stop the top of the carrots going green.

Covering the tops will also help to stop the carrot fly which is a common pest of carrots.



www.growinggrub.co.uk

Pea



1. Your peas will need lots of water, especially when the first flowers appear and when the first 'pods' form. Water them well every two days but if the weather is very hot water them every day.

2. Keep your peas free of weeds - weeds are any other plant which grows near your pea plant which isn't the pea plant!

3. As the pea plants grow make sure they are clinging to their peas sticks and climbing their way up them. If they need help gently move the pea plant towards the pea stick.

4. If you have any compost left put it around the bottom of the plant, about 4cm thick.

5. Birds can be scared away to stop them pinching your peas – put some sticks in the ground with plastic bottles on top which rattle in the wind or make a scarecrow (both are good ways of recycling some rubbish).



Spinach



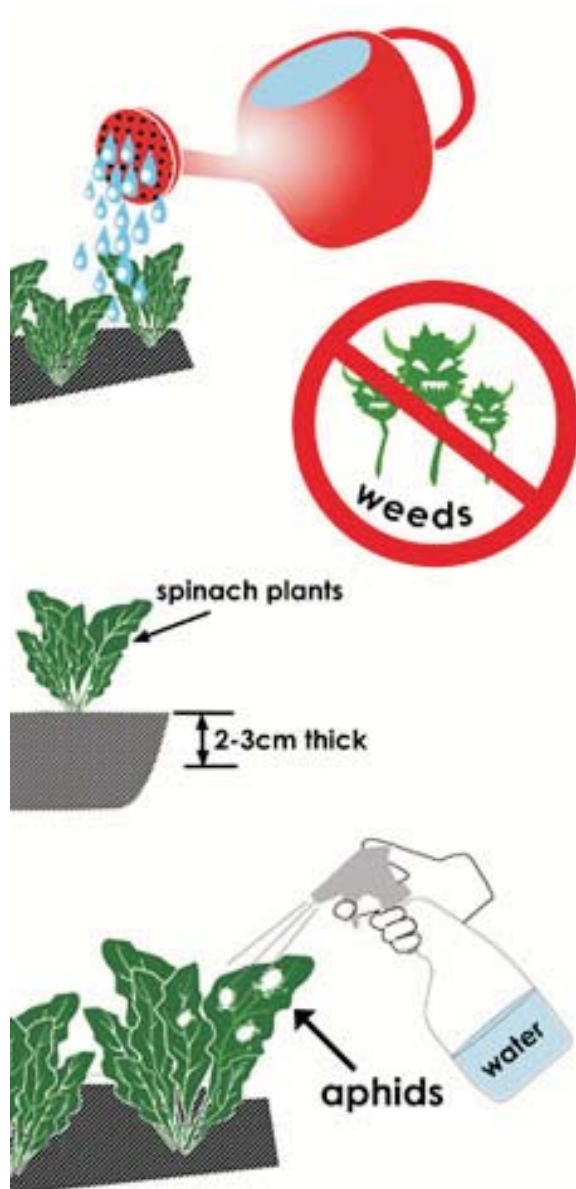
Your spinach plants will need to be watered every two days but if the weather is very hot water them every day.

Keep your spinach plants free of weeds - weeds are any other plant which grows near your spinach which isn't the spinach plant!

If you have any compost left put it around the bottom of the plant, about 2/3 cm thick.

Watch out for slugs on your seedlings, see the Slug Action Plan (in Extras) to find out how to get rid of slugs without harming them or using chemicals.

Spinach plants may attract aphids which are tiny creatures which feed off the plant and can make the leaves to go yellow. If you see aphids these can be sprayed off using a powerful spray of water.



Session Two Care Card

Tomato



1. Your tomato plants will need to be watered every two days but if the weather is very hot water them every day.

2. Keep your tomato plants free of weeds - weeds are any other plant which grows near your tomatoes which isn't the tomato plant!

3. If you have any compost left put it around the bottom of the plant, about 2/3 cm thick.

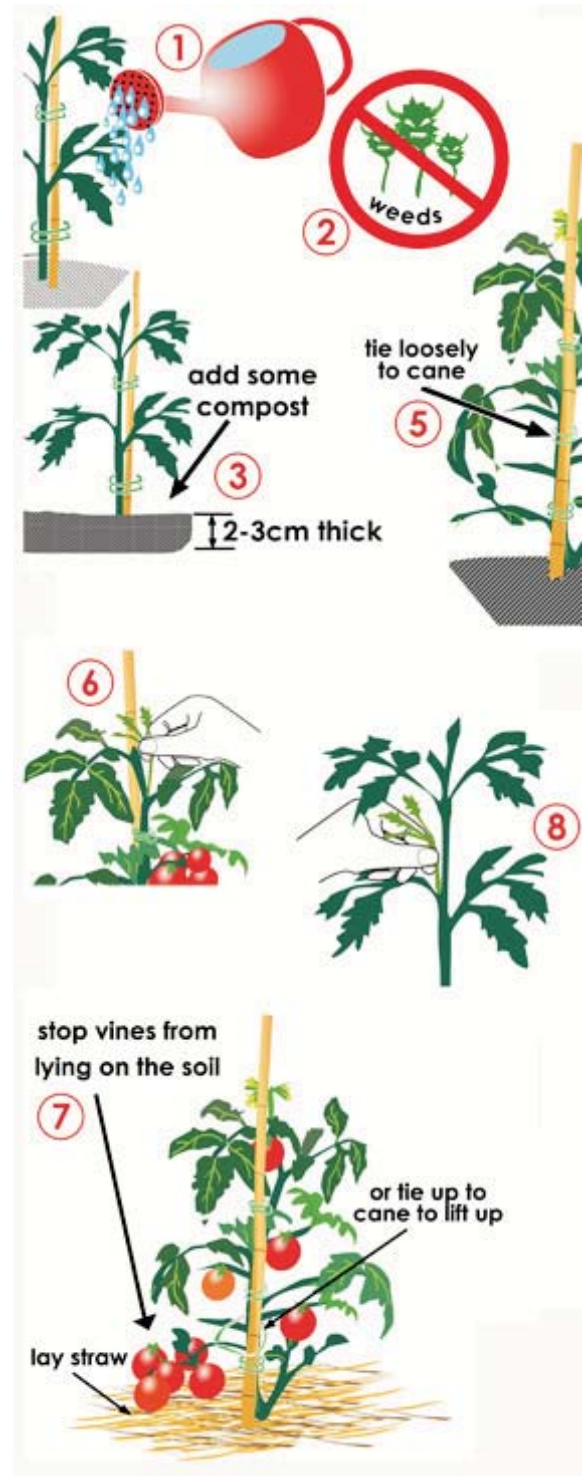
4. Watch out for slugs on your seedlings, see the Slug Action Plan (in Extras) to find out how to get rid of slugs without harming them or using chemicals.

5. As the plants grow taller keep tying them loosely onto their canes so they don't fall over.

6. When the plant has formed three or four 'tresses' - clusters of fruit, pinch off the top of the plant to stop any more tresses forming. This makes sure that you won't get lots of unripe green tomatoes and instead the plant's energy goes into making lovely ripe tomatoes.

7. Make sure the tomatoes are kept off the soil – tie them to the cane or put straw under them.

8. It is also good to pinch off the side shoots which grow from each leaf joint with your fingers.



Grow Your Own Grub Project Session Two

Teacher's follow up notes to

Session Two

What next? Planning for Session Three

We have included some suggestions for activities which could be suitable for the weeks between Sessions Two and Three. Activity Cards 6,7 & 8 will encourage children to think about where our food comes from, how far it has travelled to be on our plates, and how it is that we can get some foods all year round when they are out of season in our country.

Activity card 9 asks children to think about meals or snacks for Session Three which is all about food-tasting! In between the second and third sessions the children could work on their plans for the final session. The session can be about trying the food in its raw state, as many children have not eaten raw vegetables, or preparing a simple meal or snack such as a salad or sandwich. It can also include how to present the food in an attractive way - its amazing how artistic we can be with food! This work is to emphasise the importance of healthy food.

To help with the planning for Session Three here are some suggestions:

1. Send a letter to parents inviting them to Session Three:

[www.growinggrub.co.uk/session1/Session one Parents Invite Letter.pdf](http://www.growinggrub.co.uk/session1/Session%20one%20Parents%20Invite%20Letter.pdf)



Grow Your Own Grub Project Session Two

2. Check the progress of the plants; if it looks like they will not be ready in time for the third session then you may need to buy some tomatoes, spinach, peas and carrots to show what their plants will eventually grow into.

3. Use the Activity Card 9 to get some ideas of what to prepare for the last session.

4. For schools in Portsmouth some resources may be available from the city council to use for the food-related games.

http://www.growinggrub.co.uk/extras/extras_frameset_02.htm

5. Check availability of food preparation area in your school if appropriate

Children's Session Two Instruction Cards (next page)

Related activities which can be done during this session or at any other time:



Food Seasons Game



Here is a list of fruit and vegetables that we can grow in the UK. Match up each food to the season it grows in.

Type of Food	Season
Apple	
Strawberry	Spring
Blackberry	
Carrot	Summer
Cucumber	
Tomato	
Peas	Autumn
Spinach	
Mushroom	Winter
Brussel Sprout	
Cabbage	
Lettuce	All year round
Green or Runner bean	

Teacher's Explanation

This game emphasises that food is seasonal and although we can buy many foods all year in supermarkets this was not always possible. It is better for the environment if we buy food in season and where possible from our own country. Points of interest – Blackberries grow in the wild very easily, brussel sprout are eaten at Christmas because they are one of the vegetables that grow in the winter. Some foods grow all year round such as mushrooms and different types of cabbage and some can be stored so we can eat them out of season such as carrots and apples.

Answers can be found in the Teacher's Answer Card at the end of the session.

Activity Card 7

Food Miles Game



Some of the foods that we buy are flown thousands of miles to be in our shops when they often grow in our own country! Whenever possible we should try to buy food which has been grown close to where we live to reduce pollution caused by food being flown long distances around the world. Match these foods (which can all be grown in the UK) with the country you think they may have come from.

Type of Food

Apple

Strawberry

Blackberry

Carrot

Tomato

Peas

Spinach

Green bean

Country

South Africa

Argentina

Spain

Mexico

Kenya

Guatemala

USA

Morocco

Teacher's Explanation

It would be good to have an atlas or a map for the children to use to illustrate how far some produce has travelled to be in our shops even though it grows in the UK in season – refer back to Activity Card 6. Identify which food has travelled the furthest distance and what this means for the environment. Explain that carrots are the only food on the list that was grown in the UK.

For further resources on food miles and food and the environment see the Oxfam 'Cool Planet' website and the Soil Association Education Resources – details in our Useful Resources Section.

Answers can be found in the Teacher's Answer Card at the end of the session.



Activity Card 8

Food Miles Game



Next time you go shopping for food with your family look at the labels on each of the items listed below to see where they have come from.

Name of Shop :

Item

Country of Origin (Where it was grown)

Apple

.....

Strawberry

.....

Blackberry

.....

Carrot

.....

Tomato

.....

Peas

.....

Spinach

.....

Green bean

.....

Teacher's Explanation

If this activity is given as a simple piece of homework before the classroom session, the class (or the four groups) can work through the topic of 'food miles' – how far food has travelled from around the world to be in our supermarkets and the environmental damage this causes. You will be able to draw on the issues covered in Activity Cards 6 & 7 which are designed to make the class aware that a lot of this food can be grown in this country where it will taste better and be less damaging to the environment.

There are some great classroom resources available that cover this topic in detail. See the section on Food and the Environment in the Further Resources Section of this site.



Recipe Planning



Creating Recipes for Session 3

You can use this card before Session 3 to encourage the children to think about what they would like to make with their crops in the food-tasting session. If you have any extra money you could buy some other fruits and vegetables that the children have chosen to go with their home grown ones.

In a class discussion or asking each child or group to write down answers discuss the following:

1. Ask the children to think about how they would like to eat the crops they have grown, for instance do they want to try them raw or cook with them?

Have they tried each of the four vegetables before?

Which is their favourite vegetable out of the four?

With a piece of paper with the shape of a plate drawn on it ask the children to make a colourful design of how the four vegetables could look together on the plate – for example they could draw and colour in a face shape or animal/plant design or anything they like.

There are some great classroom resources available that cover this topic in detail. See the section on Food and the Environment in the Further Resources Section of this site.



Session 2 Activity Cards Answers



Food Seasons Game (Activity Card 6)

(Answers: key = s – spring, su – summer, a – autumn, w – winter, ayr – all year round. apples – a/w, strawberry – su, blackberry – su, carrot – su/a/w, cucumber – su, tomato – su, peas – su, spinach – su/a/w, mushroom – ayr, brussel sprout – w, cabbage – ayr, lettuce – ayr, green/runner bean – su)

Food Miles Game (Activity Card 7)

(Answers: apple – South Africa, USA, Argentina, Strawberry – Spain, Blackberry – Mexico, Green Bean – Kenya, Morocco, Tomato – Spain, Spinach – Spain, Peas – Guatemala, Carrots – UK!)

Grow Your Own Grub

Session Three *(Harvesting)*



This is the final session - it's time to pick and taste what you have grown!



We estimate the time needed is one and a half hours for the classroom session.

Teacher's Lesson Plan for Session Three

1. Introduce third session
2. Discussion
3. Explain information cards
4. Explain harvesting cards
5. Food preparation
6. Explain recipe cards
7. Games/activities
8. Explain evaluation forms/cards

This section introduces the third session of the Grow Your Own Grub project.

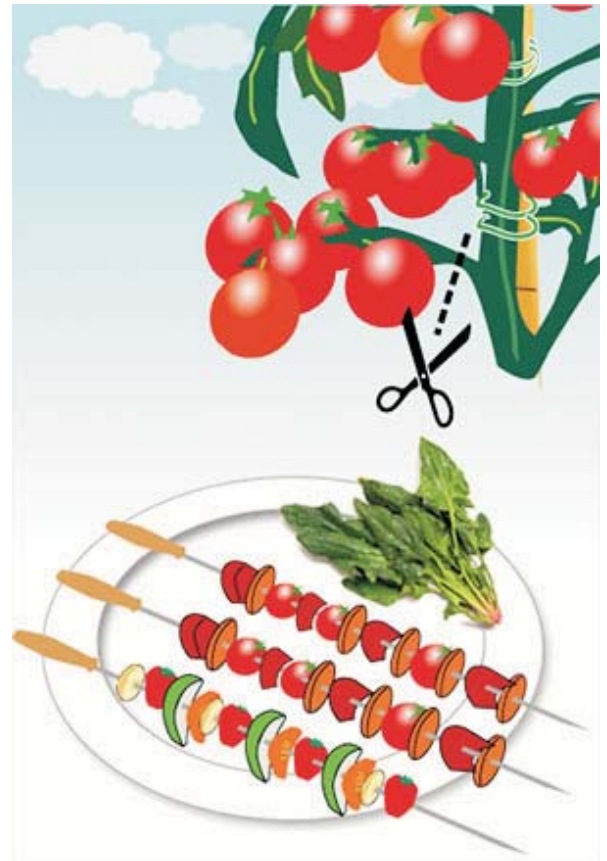
This final session will be slightly different because the aim is to have parents present and joining in with the food-tasting. Of course it is difficult to predict how many parents will come but you may have an idea by the number of reply slips you have received.

The session could be run in a number of ways depending on what you think is most suitable for your school, here are some suggestions:

Ideally the final session would be one and half hours.

1. Split the class into their vegetable groups again, with parents joining their children's groups, and have a 'round robin' system where each group takes it in turn to do four different activities for 15 minutes each:

a. harvesting their own produce e.g. carrot group picks carrots





- b. washing and preparing their veg/fruit for eating
- c. playing a food game e.g. quiz (with prizes)
- d. another game of your choice

Food tasting can take place at the end of the session with the whole class for up to half an hour

2. The food has already been harvested and washed ready for Session Three – this may take up to half an hour.

When parents arrive the class is divided into their groups and each group prepares a dish as artistically as possible. When they have all finished the dishes are shared – this part of the session may take up to 40 minutes.

After the food-tasting the children and their parents can remain in their groups and do a food quiz for the rest of the session, one group could win a prize.



Teacher's guidelines

Introduce the third session:

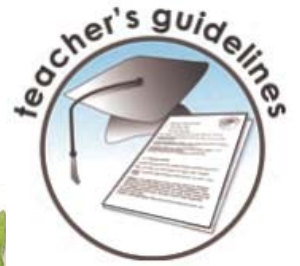
In this session you will be doing what is called 'transplanting' - 'transplanting' simply means moving our plants from one place to another.

"We have been looking after our plants by watering and weeding them and now they have started to produce food for us to eat."

In this session we will be harvesting our food, which means either digging it up from the ground or picking it off the plant. Once we have collected our food we will learn how to prepare it for eating, this can be as simple as just washing it and eating it raw, preparing a simple



Grow Your Own Grub Project Session Three (Harvesting)



dish with it such as a salad or sandwich or making a cooked meal using our food e.g. pasta and tomato sauce or vegetable soup."

Discussion with class:

Discuss what the children have enjoyed over the last few weeks; what has been their favourite part of the project - sowing the seeds, when they first appeared above the compost, planting them etc?

Part of this session involves asking the children to join in with the evaluation of the project so this discussion can be useful to help them start thinking about what they have liked/not liked etc. have liked/not liked

Children's Session Two Information Cards: (next page)

"As each vegetable/fruit is harvested and prepared for eating in a different way, we have information cards for each group which tells us how to harvest and then eat your vegetable/fruit. For example do we peel our fruit or vegetable? Is it better to leave the skin on?"



Carrot



As carrots grow below the ground they can be covered with soil when pulled out

Carrots can be scrubbed and scraped to get the soil off

If they are very mucky they can have the outer skin taken off with a peeler

Because a lot of nutrients are below the skin try not to make the peel too thick



Pea



Peas grow in pods which are attached to the pea plant which grows above the ground

Peas can be taken straight from the pod and eaten immediately as they are not dirty



Spinach



As spinach grows above the ground the leaves should remain quite clean

When the leaves have been picked give them a wash under the tap and shake off any extra water

You may want to trim off the stalk if it feels a bit tough, but it is all edible so maybe try it first!



Tomato



Tomatoes grow above the ground where they are attached to the tomato plant

When they have been picked they can be given a wash under the tap

Tomatoes do not need to be peeled they can be eaten immediately



Practical Session

This practical session involves of harvesting our food which has grown over the last few weeks, there should be some spinach, carrots, tomatoes and peas which are ready to pick (if there is no produce you will need to buy some fruit/veg to use instead).

Harvesting can be done in any weather but hopefully it will not be raining!.

For this session you will need:

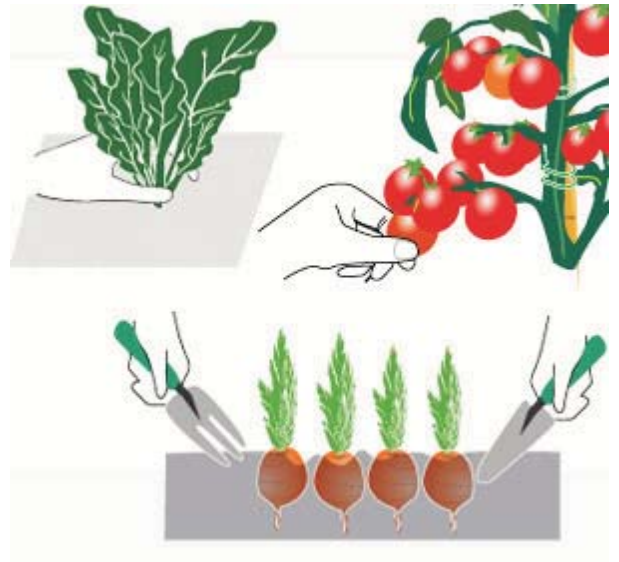
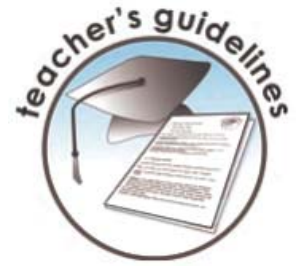
1. A fork to dig the carrots up (if grown in containers then a small hand fork will be fine to use)
2. Something to put the produce in eg bucket, bowl etc
3. Gloves

As each group will need to harvest their food in different ways we have included four instruction cards to show how to do this

Children's Harvesting Cards (next page)



Grow Your Own Grub Project Session Three (Harvesting)



Carrot



Harvesting your Carrot plants

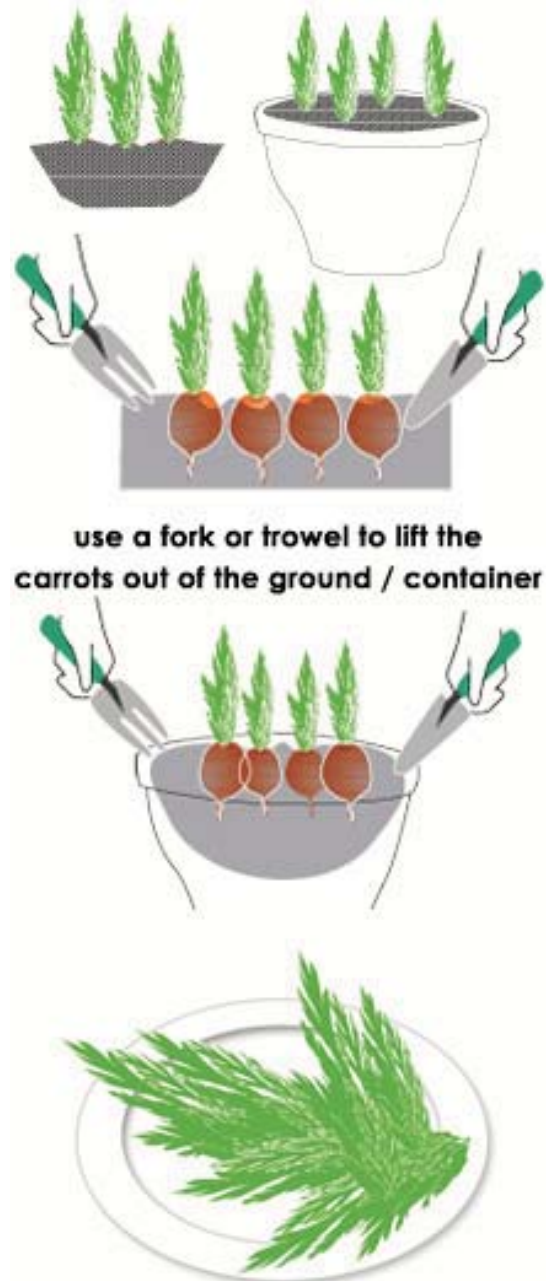
Carrots have orange roots which grow below the ground, it is this part of the vegetable which we eat. They can be long and slim or short and round

Above the ground you will see the green feathery carrot tops

We can pull these to get them out but sometimes they break off

To get your round carrots out of the ground it is best to put a small fork or trowel into the ground near to them and lift them up

Did you know that you can even eat the top green leafy part of the carrot although not many people do! (It can be put in a salad)



use a fork or trowel to lift the carrots out of the ground / container

Pea



Harvesting your Pea plants

Peas grow in pods which are like small green 'cases' which the peas grow inside

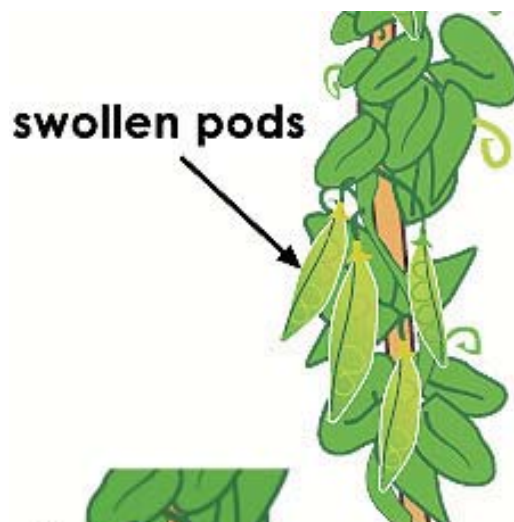
You need to look for the pea pods which are swollen as these should have fully formed peas inside

Pick these pods as soon as they are ready as they will be at their sweetest then

Pick all of the pod from the top as this will encourage more pods to grow

Pick frequently as this also encourages more pods to grow

If pods haven't swelled and formed peas then it is still possible to eat the pods, these are known as 'mangetout' peas



pick all the pod from the top



'mangetout' peas

Spinach



Harvesting your Spinach plants

Spinach has lots of green leaves which grow above the ground and it is this part of the plant that we can eat

To remove the leaves find a leaf and follow the stalk all the way to the bottom of the plant, then give a light twist and pull the leaf away

Take the outer leaves first and work your way inwards

It is possible to take all the leaves off the spinach plant then leave it for a while and the leaves will grow back and we can harvest them again

And Again and Again and Again!



twist at the base of the plant taking all the stalk off



take the outer leaves first



Tomato



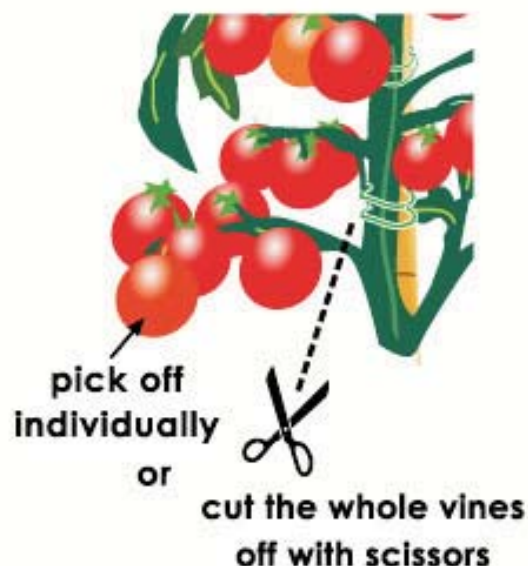
Harvesting your Tomato plants

Tomatoes are small round fruits which grow on vines (or sometimes called tresses) on the tomato plant above the ground

When the tomatoes first grow they are green, we know they are ready for harvesting when they have become red all over

Pick the ripe fruits as soon as possible to encourage the ripening of the other tomatoes

You can pick individual tomatoes off the plant or cut the whole vine off





Food Tasting Preparation

This practical session consists of preparing the foods which the children have grown over the last few weeks. What you prepare will depend on your school's facilities and perhaps your time so we have separated this part into three levels which range from the simplest food preparation to the more complicated. These different levels of food preparation will require different equipment so we have included what you will need with each separate level. There are four recipe cards for each group to give the children some ideas about what they can do with each fruit/vegetable, the cards can be photocopied for the children to take home with them.

Level 1: The simplest way to eat fruit or vegetables is to eat them raw! The four crops which have been chosen for this project can be eaten almost immediately after harvesting them. The only preparation is to wash them (refer to children's information cards for specific details). After they have been washed they can be tasted by the children. You will need:

Scourer/cloth to clean veg or peeler, tea-towel to dry them and plates.

Level 2: The next simplest way to eat fruit/vegetables is to make a simple dish which they can easily be added to. Examples are:

1. A salad can be made adding the tomatoes, peas, carrots and spinach. They can be cut up into different shapes or the carrot can be grated.
2. Make a sandwich and add sliced tomato, spinach leaves or grated carrot.
3. A fruit/veg kebab is easy, get some skewers and put the veg/fruit on here



Grow Your Own Grub Project

Session Three

(Harvesting)



You will need:

Scourer/cloth to clean veg or peeler, tea-towel to dry them, plates, a chopping board, skewers, any extra foodstuffs e.g. bread, other salad vegetables or fruit.

Level 3: If you do have some cooking facilities then you can prepare a simple cooked dish, such as vegetable soup or pasta and vegetables with a tomato sauce. Please refer to the recipe cards for a step-by-step guide of how to cook these simple dishes.

You will need: Scourer/cloth to clean veg or peeler, tea-towel to dry them, plates, a chopping board, any extra foodstuffs e.g. bread, other salad vegetables or fruit, some pans, a ladle and a wooden stirring spoon.

Children's Recipe Cards (next page)



Recipes for using Tomatoes - Card 1

Tomato Soup (Serves 4)



Ingredients:

- 2 dessertspoons margarine or vegetable oil
- 1 medium onion (sliced)
- 1 clove of crushed garlic
- 10 large or 15 medium tomatoes
- 1 vegetable stock cube
- 2 cups of boiling water
- 1 teaspoon dried parsley (or 2 teaspoons chopped fresh parsley)
- 1 teaspoon dried basil (or 2 teaspoons chopped fresh basil)
- season to taste

Serving Suggestion:

With crusty bread or garlic bread.

Method:

1. Put tomatoes in a large saucepan of boiling water for 30 seconds until the skins start to peel off the tomatoes.
2. Put the tomatoes in cold water and peel off all the skins and chop into small chunks.
3. Melt margarine or oil in a saucepan. Slice onion and fry in the saucepan with the garlic for a few minutes.
4. Add the chopped tomatoes and their juice and break up with a spoon.
5. Cover the saucepan with a lid and continue to cook until the tomatoes become a pulp, stirring occasionally.
6. Dissolve the stock cube in the boiling water, and add to the saucepan.
7. Peel and chop the potatoes. Add to the saucepan with the rest of the ingredients.
8. Simmer for 20-30 minutes or until the potatoes are cooked.
9. Liquidise and reheat before serving. to taste

Recipes for using Tomatoes - Card 2

Guacamole (Serves 4)



Ingredients:

- 1 ripe tomato, chopped
- 1 lemon or lime
- 1 avocado
- ½ onion, finely chopped
- 1 small chilli, deseeded and finely chopped or 1 teaspoon chilli powder
- A pinch ground cumin (optional)
- A pinch dried or 2 dessertspoons fresh coriander

Method:

1. Squeeze the juice from the lemon or lime into a small bowl.
2. Cut the avocado in half around stone (pit) and remove stone. Carefully peel off the skin and dice the flesh, place in the lemon or lime juice and toss. Mash roughly with a fork.
3. Add the onion, tomato, fresh chilli, cumin, chilli powder and coriander to avocado.
4. Mix well and serve.

Serving Suggestion:

- | | |
|------------------|--------------------|
| With pitta bread | With chilli |
| With bread wraps | On jacket potatoes |

Recipes for using Tomatoes - Card 3

Salsa (Serves 4)



Ingredients:

3 tomatoes, washed and chopped

1 small onion, peeled and chopped

2 celery sticks, washed and chopped

½ carrot for colour and crunch, peeled and chopped

A pinch of chilli powder or ½ - 1 fresh chilli to taste

6 dessertspoons lemon or lime juice

Chopped fresh or dried parsley

Method:

Mix ingredients together.

Serving Suggestion:

With pitta bread

With bread wraps

Hot Fresh Tomato Salsa

(Serves 4)



Ingredients:

4 tomatoes, washed and chopped

1 small onion, peeled and chopped

2 celery sticks, washed and chopped

½ carrot for colour and crunch, peeled and chopped

A pinch of chilli powder or ½ - 1 fresh chilli to taste

6 dessertspoons lemon or lime juice

Chopped fresh or dried parsley

Method:

Mix ingredients together in a bowl and serve.

Serving Suggestion:

With pitta bread

With bread wraps

With raw vegetables such as carrot, cucumber, peppers, broccoli, celery and radishes cut up into small pieces

Vegetable & Pasta Soup

(Serves 4)



Ingredients:

- 1 cup of boiling water
- 1 vegetable stock cube
- 1 large tin of chopped plum tomatoes in tomato juice or 7 large fresh tomatoes
- 1 small tin of baked beans
- 1 clove of garlic (crushed)
- 1 teaspoon dried mixed herbs (or 2 teaspoons of fresh mixed herbs)
- 1 cup pasta (e.g. spirals or macaroni), or broken up spaghetti
- 1 cup fresh peas (or frozen if your peas aren't ready)
- season to taste

Method:

1. Dissolve the stock cube in the boiling water.
2. Put all the ingredients into a large saucepan.
3. Bring to the boil and simmer for 20-25 minutes.
4. Check that the pasta is cooked and serve hot..

Serving Suggestion:

With crusty bread or garlic bread

Coleslaw (Serves 4)



Ingredients:

½ white cabbage, finely shredded

2 carrots, peeled and grated

1 onion, finely chopped

6-7 dessertspoons low fat mayonnaise

Method:

1. Place vegetables in bowl and mix thoroughly.
2. Add enough mayonnaise to bind ingredients together and stir thoroughly.
3. Keep in refrigerator until needed.

Serving Suggestion:

With crusty bread, garlic bread

With main meat or vegetarian dishes

With jacket potatoes

With toasted sandwiches

With ploughmans

With cold meat

Red Hot Slaw (Serves 4)



Ingredients:

- ½ small red cabbage, finely shredded
- 1 large carrot, peeled and grated
- 1 red onion, peeled and finely chopped
- 2 red skinned apples
- 2 dessertspoons lemon juice
- 1 cup reduced fat cheddar cheese, grated or ½ cup strong cheddar cheese

Dressing:

- 6 dessertspoons reduced calorie mayonnaise
- 1 garlic clove, crushed
- 1 teaspoon paprika
- 1-2 teaspoons chilli powder

Method:

1. Place cabbage, carrot and onion in a large bowl.
2. Pour the lemon juice into a bowl, core and dice the apples and add to the bowl, tossing the apples to coat them with lemon juice (to prevent browning).
3. Add the apples to the main bowl along with the cheese.
4. Mix all the ingredients for the dressing in a bowl and then add to the vegetables, mixing thoroughly.
5. Cover and place in refrigerator until needed.

Serving Suggestion:

With crusty bread, garlic bread

With main meat or vegetarian dishes

Mixed Leaf Salad

(Serves 4)



Ingredients:

Spinach leaves and other salad leaves such as lettuce

8 fresh tomatoes chopped up or whole

handful of fresh peas

6 round carrots sliced

1 cucumber

1 dessertspoons white wine vinegar

A pinch of sugar

½ teaspoon Dijon mustard

4 dessertspoons olive or corn oil

Method:

1. Place the salad leaves in a large serving bowl.
2. Add the tomatoes, carrots, peas and cucumber.
3. Beat the vinegar, sugar and mustard in the small bowl until the sugar dissolves. Gradually beat in the olive oil until creamy and thoroughly mixed.
4. Pour the dressing over the salad and toss thoroughly.

Serving Suggestion:

With crusty bread, garlic bread

With main meat or vegetarian dishes



After the Project

The seeds have been sown, the seedlings planted, they have been tended and have grown to produce some lovely fresh food which has now been harvested and eaten!

Here are some follow-up points to consider at the end of the project:

1. You may not have harvested all your crops, so we have included a guide to how long your vegetables/fruit will last and when you will know that they are finished:

Tomatoes: All red ones are ready to be picked, if you have too many they can be frozen. If there are green ones then either leave them on the stalk to ripen or pick them and place in a drawer to ripen off.

Peas: All pods can be picked and ones left over can be frozen; they will not last for long before turning brown and dying.

Spinach: The leaves can continue to be picked for a long time and the plant can be left in the ground until early winter.

Carrots: They can stay in the ground for a while but it is best to lift them all before mid or late autumn.

2. When the plants have finished producing any food and are ready to be pulled out then if possible put them in a compost bin along with lots of other compostable waste so over the winter you can be



Grow Your Own Grub Project

Session Three

(Harvesting)



making your own compost! You can then put this on your growing area next year. (see our composting guide for details of how to get a very cheap compost bin and other questions).

3. If you have grown your food in the ground you may want to clear the area of the dead plants and any weeds. If you are going to repeat the project next year then if possible add some compost to the soil and cover until the next year to stop the weeds from growing (use old carpet or black plastic)

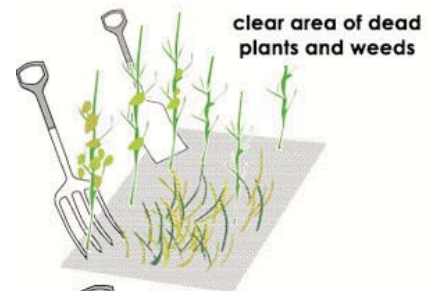
If you have grown your food in containers then empty the old compost into a compost bin if you have one and replace with new compost if you are going to repeat the project again.

Now the Grow Your Own Grub project is finished you may all be brimming with enthusiasm for growing your own food! Of course the project can be repeated each year and different vegetables can be tried, there are even foods which can be planted in autumn which will begin to grow through the winter which you can harvest in May/June time of next year.

In the 'What Next' section we have included some 'extension ideas' with suggestions for further gardening activities for schools with or without any growing space. We have also provided a resource list which includes other packs which are available to schools, useful websites, books and helpful organisations.

Children's Activity Cards (next page)

Related activities which can be done during this session



Memory Game



Yesterday I ate:

.....packets of Crisps

.....chocolate bars

.....types of vegetables

.....packets of sweets

.....types of fruit

I ate chips times yesterday

I ate beans..... times yesterday

Today for breakfast I ate.....

Today for breakfast I drunk.....

Teacher's Explanation

You can use this game to get the children think about whether they have had their 5 portions of fruit and vegetables, to emphasise the importance of eating breakfast and having high fat, high sugar foods like crisps and sweets in moderation. For more information use the 5 a day website to see what counts as one of your 5 portions and the 'Balance of Good Health' Diagram to show how to balance the different types of food that we eat. You can find these links in our Further Resources Section.

Fruit & Veg Quiz



Q 1. How many portions of fruit and vegetables should we eat every day?

Q 2. Name 2 fruits beginning with the letter 'P':

Q 3. Name 3 vegetables beginning with the letter 'C':

Q 4. Which fruit is said to keep the doctor away?

Q 5. Which vegetable is said to help you see in the dark?

Q 6. Which vitamin do you find in oranges?

Q 7. Which of the following vegetables are green in colour?

broccoli swede cauliflower spinach

Q 8. Which of the following fruit and vegetables grow on trees?

pears oranges lemons apples

Q 9. How many of the following forms of fruit and vegetables count towards your 5+ every day?

fresh dried frozen tinned juices

Q 10. We should eat a variety of fruit and vegetables because they are rich in?

proteins vitamins minerals

Answers can be found in the Teacher's Answer Card at the end of the session.

Teacher's Answer Card

Session 3 Activity Cards Answers



Food Seasons Game (Activity Card 6)

Answers

- 5 or more
- Pears, Plums, Peach, Pomegranate
- Carrots, Cabbage, Cauliflower, Courgette, Celery
- Apple
- Carrot
- Vitamin C
- Broccoli & Spinach
- All of them
- All of them

Grow Your Own Grub

What Next?



Please visit the 'What Next' section of the website - www.growinggrub.co.uk - which includes Extension Ideas and Further resources, (these pages are simple to print direct from the website).

Also the 'Extra's section includes the following useful items: Timescales Chart, Project Evaluation, Composting Guide, Slugs & Snails Guide, Portsmouth Schools, Acrobat PDF Reader Software.

Contacts

For any enquiries about this website and the 'Grow your own Grub' project please contact the:

Health Improvement & Development Service (www.hids.org.uk) at
Portsmouth City Council (www.portsmouth.gov.uk)

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