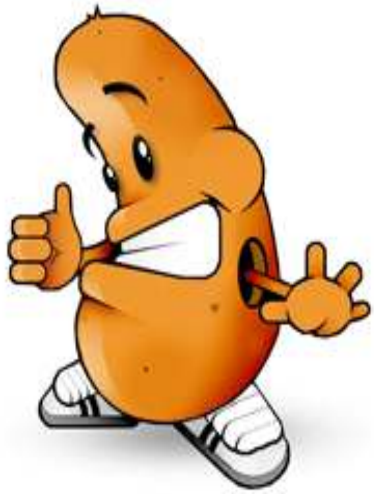
Potatoes for Schools



Teachers' guide
This guide has been developed to help you make best use of all the exciting resources on the Potatoes for Schools website. The guide contains the 12 potato lessons found in the following areas of the site: *Growing potatoes, Knowing potatoes, Healthy eating and potatoes* and *Cooking and potatoes*. The guide also contains other teacher information - this is listed below.

Contents

The guide provides a series of generic lesson notes to help you teach primary aged children about potatoes. The notes are designed to provide the basic structure and content for lessons, but will need to be tweaked to meet the needs of individual classes. Under the 'task' section there is a suggested task for children aged 5-7 and one for children aged 7-11 years.

The lesson notes show how the worksheets and other materials on the Potatoes for Schools website can be used. Where materials are available on the site to support the lesson, they are shown in bold.

You could plan a block of potato themed work and use the notes to get you started, or dip into the notes and materials to support your teaching, e.g. teach about investigations in science by setting up a potato growing investigation.

Growing potatoes - Lesson 1

Children will:

- learn what a potato plant looks like and how potatoes grow.

Introduction

Explain to the children that they will be learning about potatoes. Ask them to tell you what they already know about potatoes. Prompt them with the following questions, collecting children's answers without confirming any ideas at this time:

- What do potatoes look like?
- Where do potatoes come from?
- What do you think a potato plant looks like?
- Is a potato plant alive?
- What part of a plant does a potato come from?
- How long do you think they take to grow?
- What time of the year are they planted and harvested?
- How are potatoes cooked?

Ensure the children understand that potatoes come from a plant and that they are called tubers – a part of the plant connected to the root. Explain that potatoes grown under the ground. Use the **Growing potatoes** PowerPoint to show the children what a potato plant looks like and how potatoes grow. With older children, discuss the functions of the different parts of the plant, e.g. roots anchor the plant, leaves help the plant produce food – photosynthesis.

Task

5-7

Provide children with a copy of the **Potato plant** worksheet 1. Ask the children to name all the parts of the plant. Talk about which label belongs to each part of the plant. Get the children to cut and stick the labels to the correct plant parts and colour the plant picture.

7-11

Get the children to carry out some potato research in small groups. Each group should create a potato fact sheet. This should include: what a potato plant looks like, a labelled sketch, the function of different plant parts, the life processes of the plant, e.g. growth, nutrition, movement, reproduction. It could also include information about: growing potatoes, what a potato needs in order to grow well; where in the UK potatoes are grown; types of potatoes grown in the UK; how to store potatoes; how long they take to grow.

Summary

Talk to the children about their tasks and what they have learnt. Ask some of the children to share their work.

Why not…

- Display images of different types of potato;
- Ask children to record how many times they eat potatoes over a week;
- Let the children play **The potato year activity**.

Growing potatoes - Lesson 2

Children will:

- learn how to grow their own potatoes.

This session be used to help your entry to the *Grow Your Own Potatoes* competition.

You will need to prepare the seed potato a few weeks in advance to do the planting in this session. Information can be found on the **Planting my potato** factsheet 1, **Growing my potato** factsheet 2 and **Growing tips** factsheet 3.

Children can work in groups of 4-5 and will need a set of these items per group:

- Seed potatoes - *use those provided by the Potato Council if you are entering the Grow Your Own Potatoes competition;*
- 1 x egg box;
- Hammer and nail – ADULT USE ONLY;
- 1 x bucket (with diameter of less than 50cm) or growing beds in your school grounds - *use the grow bag provided by the Potato Council if you wish to enter the* competition;
- Compost or soil.

Optional:

- Trowels;
- Plastic gloves - hands must be washed thoroughly after handling potatoes if gloves are not used;
- Watering can.

Introduction

Explain to the children that they will be planting a potato. Question the children:

- What equipment will we need in order to plant a potato? Make a list.
- Can you explain exactly what you think we will need to do, step by step?

Look at the **Growing my potato** factsheet 2 and show the children the **video clips** of potatoes being planted. Discuss what is happening and ask the children about how they could do this when they plant their potatoes. Summerise what the potatoes need in order to grow well. Establish that the potato – tuber, is a seed.

Task

Split the children into groups of 4 or 5. Before you begin, establish who will be doing what part of the planting. Talk them through how they will use the equipment to plant their potatoes. This will vary depending on whether you have a school garden in which to grow them, or whether you will be growing them in buckets. *Remember to use the grow bags provided if you wish to enter the Grow Your Own Potatoes competition*. Caution: if you are using buckets or grow bags, these will be quite heavy when filled with soil. Put them where you want them to be before you fill them. Allow the children to plant their potatoes.

5-7

How my potato grows worksheet 2 – involves sketching how the potato plant looks at 3 week intervals. Talk through the worksheet with the children and explain that they will fill it in every 3 weeks. Talk about what they will be drawing over the coming weeks. You may like them to do a sketch of the planted potato or you may wish to wait for the first 3 week interval before you begin. With young or those who may need more support, you could enlarge the worksheet and fill it in as a class.

7-11
Create a story board/diary to record how the potato grows at regular intervals. Children could use a digital camera or video camera to record progress.

Summary
Talk to the children about what they will have to do to care for their potatoes. Get them to decide how they will ensure their potatoes are cared for, e.g. a watering rota.

Why not…

- Get the children to measure the height of their potatoes at regular intervals over the coming weeks and create a graph.
- Ask the children to write a set of instructions to tell someone how to grow a potato.
- Grow a different type of plant which provides food, e.g. bean, cress. Compare how this plant and your potato plant grow. Use the **Potatoes and other plants** worksheet 3 to compare two plants.
- Look at the **potato cam** on the Potatoes for schools website to see other potatoes growing. Go to: http://www.potatoesforschools.org.uk

Growing potatoes - Lesson 3

Children will:

- learn what potatoes need in order to grow well.

Children can undertake their investigation in groups or you could complete it as a class. See the **Grow potatoes investigation** factsheet 4 for equipment and investigation ideas.

Groups: Each group can plant 4 potatoes, keeping one as a control and changing one variable for each of the other 3 plants.
Class: Split the class into four groups with each group being responsible for growing one potato with a different variable. For young children you could just plant a control and one or two other variables.

This investigation can be set up separately or in conjunction with the previous session (Lesson 2). If it is done as part of the previous session the 'control' potato/es can be used for the *Grow Your Own Potatoes* competition.

Introduction
Talk to the children about what they think is needed to make a potato grow well (light, water). Ask the children how they know this, and how they could confirm what they think. Establish that they could remove or change one of the conditions they think the potato needs and see if it makes any difference. Discuss the condition changes you could try, e.g. temperature, water, light, soil. Look at the **Grow potatoes investigation** factsheet 4 for ideas. With older children, these can be referred to as variables or factors. Explain that in order to see whether making these changes makes any difference, you must grow a potato in the usual way as well, so you can compare them. The potato grown in the usual way is called the control. The other potato/es must also been grown in the same way with just one condition/variable/factor changed so you can see if that is what really makes a difference.

Task
Let the children plant their potatoes. Talk this through together first to emphasise the importance of ensuring that only the variable/factor is changed and the rest are the same, so it is a fair test. Discuss the idea of a 'fair test' with the children to ensure they understand.

5-7
You could set up a class record or children could keep their own records. You may wish to use **Potato investigation** worksheet 4 (compares a control potato and a potato with a variable changed) or **Potato investigation** worksheet 5 (compares one control and three variables).

7-11
Each child can have their own copy of a worksheet to record their observation. You could use **Potato investigation** worksheet 4 or 5.

Summary
Re-cap on what you have done, question the children:

- What are we trying to find out?
- What have we done?

- What do you think will happen?
- How have you made sure it is a fair test?

Discuss how you will be recording the investigation including how often observations will be made.

Why not…

- Grow different types of potatoes and investigate which type grows faster and how they differ in appearance? You could use the two varieties provided by the Potato Council. You could use the **Are they the same?** worksheet 6 to help record your findings.
- Let the children have a go at the **Grow you own potatoes game.**

Knowing potatoes - Lesson 4

Children will:

- learn that there are different types of potatoes and that they can be prepared and cooked in different ways.

Some potatoes are more suitable for certain dishes than others, due to their characteristics (the way in which they cook).

For this session you will need 4-5 different types of potatoes. Ideally choose potatoes ones that look different from each other and are for different purposes, e.g. baking, mashing. Check the **Types of potato** factsheet 5 for ideas.

Introduction

Explain to the children that there are lots of different types of potatoes. Show the children a selection of different potatoes and ask them to describe the differences and similarities. You could pass the potatoes around so the children can handle them. Make sure the children wash their hands after handling the potatoes.

Explain that different potatoes are good for making different dishes. Using the **Knowing potatoes** PowerPoint, explain that some potatoes are 'floury' and some potatoes are 'waxy'. Floury potatoes break up more easily when they are cooked. These are good for making dishes like mashed potato. 'Waxy' potatoes keep their shape well when they are cooked. Waxy potatoes are good for dishes like potato salad because they hold their shape.

Ask the children to tell you about meals they have eaten which include potatoes. Make a list of different dishes and meals which include potatoes. Use the **Types of potato** worksheet 7 and discuss which types of potatoes could have been used in the dishes they have tried. Discuss the ways potatoes can be cooked, e.g. boiled, roasted, mashed. Discuss how potatoes look before and after they are cooked, e.g. roast potatoes become crispy on the outside and fluffy in the middle.

Task

5-7

Ask the children to draw and label some of their favourite potato dishes and meals. Encourage them to make their dishes and meals look as attractive as possible so they will appeal to other people.

7-11

Provide the children with **Types of potato** worksheet 7. The information on **Types of potato** factsheet 5 will help the children complete worksheet 7. Question the children on factsheet 5 to check they understand the key which indicates how waxy or floury the potatoes are. Challenge the children to design a poster to show people the different dishes and/or meals they can create with potatoes. Encourage the children to present their work in an attractive way to make their dishes and meals appeal to other people.

Summary

Consolidate children's learning by asking them the following questions:

- What is a waxy potato?
- What is a floury potato?
- What could you make from each type of potato?
- Can you name two varieties of potato?
- What is your favourite potato dish or meal?

Why not…

- Challenge the children to find out the names of as many different types of potatoes as they can. What is the most unusual type of potato they can find?
- Give children aged 7-11 the **Potato varieties** worksheet 8 as homework.

Knowing potatoes - Lesson 5

Children will:

- expand and reinforce their knowledge of the different varieties of potatoes available, as well as the dishes and meals that can be made with them by visiting a supermarket.

Arrange a local supermarket visit and ask for a manager to be present to talk to the children about the potatoes in the store. Brief the manager on the information the children will find useful, e.g. How many varieties of potato are available from the supermarket? Where are they sourced? Check that it will be OK for the children to look around the supermarket to fill out their worksheets.

Introduction

Before the visit, explain to the children that they will be visiting a supermarket to find out more about potatoes. You might like to list the questions the children would like to ask the supermarket manager in advance of your visit. Look at the sheets you would like the children to use during their visit and ensure they are clear about what they will be doing. (See the sheets indicated below by the different ages.) Talk through the usual health, safety and behaviour rules the children will be expected to follow during the visit. You will also need to follow your school's trip procedures, e.g. parent/carer consent slips, risk assessments.

Task

Arrange the visit so the store manager can talk to the children when they first arrive, answer their questions and give the children a tour of the supermarket.
Organise the children into groups, as appropriate for their age, ability and safety. Provide them with their worksheets and let them complete the tasks.

5-7

Give each of the children a copy of **Shopping trip** worksheet 9. Before they complete this sheet, ensure the children have had a good look around different parts of the supermarket to find meals and dishes made from potatoes.

7-11

Give each of the children a copy of **Exploring potatoes** worksheet 10. Ask the children to list the potatoes they can find in the supermarket, either the variety, type or dish and how they may be served.

Summary

When you get back to school, discuss the visit with the children. Ask them to talk about what they found out.

Why not…

- Take some photographs during your supermarket visit and create a display.

Set up a cooking session and try one of the **potato recipes**. The potato salad recipe will be used in lesson 11, so you may wish to avoid using that recipe at this stage.

Knowing potatoes - Lesson 6

Children will:

- learn what happens to potatoes when they are cooked.

You will need the ingredients and equipment from the **Cooking potatoes** worksheet 11.

Introduction

Explain to the children that you will be exploring how potatoes change when they are cooked. Question the children:

- What do potatoes look like when they are peeled?
- How do they feel?
- Can you eat unpeeled cooked potatoes? How? (New potatoes, baked potatoes.)
- What sorts of cooked potatoes have you eaten?
- What are the potatoes like when they are cooked compared with when they are raw?

Follow the instructions on the **Cooking potatoes** worksheet 11. Prepare enough potatoes so children will be able to work in groups with a small sample of raw, boiled and mashed to study. Demonstrate how to peel and prepare the potatoes and, if you are able to do so safely, cook them in the classroom so the children can see what happens. Show the children how they are mashed. Finally, provide each group with a small sample of raw, boiled and cooked potatoes. Make sure they are cool enough to be safe around the children.

Task

5-7

Support the children in their observations of the potatoes. Prompt them with questions:

- What is happened to this potato?
- What does it look like now?
- How has it changed?

With younger children you can record their answers or get them to draw what they see.

7-11

Allow the children to fill out the **Cooking potatoes** worksheet 11. Encourage the children to make careful observations by prompting them with questions.

Summary

Discuss the changes the children noticed. Talk about what dishes can be made from different forms of potatoes. Show the children some of the recipes from the website. With older children discuss the changes to the potatoes, could the cooked potatoes be changed back to how they were?

Why not…

- Set up a cooking session with the class and try some of the **potato recipes**. Avoid the potato salad recipe as this will be used in a later session.

Knowing potatoes - Lesson 7

Children will:

- learn about the 'field to fork' journey for a potato.

Introduction
Explain to the children that you will be looking at what happens to potatoes after they are harvested. Ask the children for their ideas on how potatoes get from 'field to fork'. Show them the **Field to fork** PowerPoint and discuss what happens at each stage. Summarise the key stages using the last slide.

Task
Set the children the task of creating their own images or drawings of the stages a potato goes through from 'field to fork'.

5-7
Display the cartoon images from the **Field to fork** PowerPoint. Get the children to work in small groups to create an image of one of the stages. They could do this using a computer or with collage or paint. Put all the stages together to create a class display. Ask each group to type a description of each stage.

7-11
Work on a computer or with art materials, textiles or pens and paper to create a step by step explanation of how potatoes go from 'field to fork'. Alternatively, challenge the children to explain how another vegetable goes from 'field to fork'. Ask the children to type up a description of each stage.
Or
In small groups the children could prepare their own PowerPoint presentation to explain the field to fork journey and present this to another class in the school. This could be presented as a play or reading.

Summary
Ask the children to show and explain what they have done.

Why not…

- Find out how other foods are grown and produced.
- Arrange a visit to a farm to see some animals being reared or fruit or vegetables being grown/harvested.

Knowing potatoes - Lesson 8

Children will:

- investigate where potatoes are grown in the UK using maps and the internet.

For this session you will need maps of the UK, an enlarged version of the **Where do potatoes grow?** worksheet 12 and access to the internet.

5-7 For younger children, find 3-4 places where potatoes are grown in the UK and write the names of the places around the edge of the worksheet. Place dots on the worksheet UK map to show where the places are. Photocopy the sheet for the children to use in the 'task' part of the lesson.
For information, the following is a list of the main places where potatoes grow in the UK: Cornwall, Suffolk, Lincolnshire, Herefordshire, Pembrokeshire, Perthshire, Yorkshire, Norfolk, Shropshire, Cambridgeshire.

Introduction
Show the children your enlarged **Where do potatoes grow?** worksheet 12 and establish that it shows the UK. Look at a map of the UK with the children and identify where you are. Talk about what it is like where you live, e.g. weather, climate. Compare it with other places the children may know or have heard about. Display your enlarged copy of the worksheet and demonstrate how to mark where you are on the sheet. Ask the children to name other places they know in the UK, e.g. where a relation lives, where they have been for a day trip or holiday. Find these on the UK map.
5-7 - With younger children, move to the task now.
With the older children, explain that they will be undertaking some research on the internet to find the main places where potatoes are grown. If you have an interactive white board with internet access you could demonstrate how to search the internet with the children. Children could also look at satellite images for example, using Google map, to get an idea of what places are like.

Task

5-7
Hand out the worksheet you adapted before the lesson. Show the children how to look at the UK map to find the places names on their sheet. When they have found the place, they need to draw lines on their worksheet to link the place names to the dots showing the location.

7-11
Give the children copies of the **Where do potatoes grow?** worksheet 12. Ask the children to work in pairs or threes to do their research.

Summary
Get the children to feedback their research and what they have found out. Question the children:

- Where are the main places potatoes are grown in the UK?
- What are these places like?
- Are they all in a particular part of the country?
- What is the climate and landscape like in these places?
- Do you think there is a reason why potatoes are grown there?
- How does the climate affect living things?

Why not…

- organise a visit to a local farm which grows potatoes.

Knowing potatoes - Lesson 9

Children will:

- learn about potato related dates.

Before the session, enlarge the **Potato dates** worksheet 13 and cut the dates into separate strips. Attach these to a wall or board in a mixed order.

Introduction

Explain to the children that you have displayed dates when something happened in the history of the potato. Read the dates and information with the children. Discuss what each of the events means. Order the dates along the board or wall. Ask the children to identify where the year they were born would go, and any other years which might be significant to the class, e.g. dates studied in other lessons, dates related to famous events or people, dates that have importance in your region or country.

Task

5-7

Organise the children into small groups and get each group to create a large picture to illustrate one of the events. You might wish to find and display some images to help the children with their ideas. Sequence the images with the class and hang them as a display.

7-11

Ask the children to carry out research to find other significant events related to potatoes. The children can use books or the internet. They could record their findings using a medium of their choice, e.g. ICT, art materials. As a class, create a timeline of potato related events, e.g. Irish potato famine. Alternatively, the children could do more research into the details of the events given.

Summary

Get the children to share their work.

Why not…

- Carry out some research to find out what potato dishes were eaten in the past, e.g. Victorian times, World War II.
- Find out more about one of the events and get the children to reinact it through drama.

Healthy eating and potatoes - Lesson 10

Children will:

- learn about healthy eating and the contribution of potatoes.

To support you with the healthy eating aspect of these sessions, download the **Healthy eating information** and **Potato information.**

Introduction

Use the **Healthy eating** Powerpoint to help the children learn about *The eatwell plate*. Show the children *The eatwell plate* and discuss the food groups. Question the children:

- What can you tell me about this picture?
- What foods can you see?
- How many groups are there?
- Which group do potatoes belong to?
- What can you say about the sizes of the groups?
- What do you think the different sizes of the groups mean?

Establish the following: it is a plate; there are 5 food groups; the groups have different names; the foods we eat can be sorted into the groups on this plate. Explain that to be healthy we need to eat a variety of foods from different groups on the plate. We need to eat more foods from the larger groups and less from the smaller groups. Help the children to see that the largest groups are *Fruit and vegetables* and the *Bread, potatoes, rice, pasta and other starchy foods* groups. Question the children about what they have eaten recently and talk about where it would fit on *The eatwell plate*. We need to eat and drink to stay alive, be active and grow.

Task

Get the children to make a record of what they ate yesterday. This can be pictorial or written.

5-7

Younger children could work in a group with each children illustrating a meal they ate yesterday.

7-11

The children could use the **Food diary** worksheet 14 to help.

Summary

Ask some of the children to talk about what they ate yesterday. Did they eat a variety of foods from *The eatwell plate*? Which foods did they eat from the *Bread, potatoes, rice and pasta* group? Could they have made any changes to what they ate to be more in balance with the plate? For example, did they eat at least 5 portions of fruit and vegetables? Did they eat foods from the *Food and drinks high in fat and/or sugar* group? Could they have made healthier choices?

Why not…

Give the children **The eatwell plate** worksheet 15 and get them to tally or draw the foods they ate yesterday in the correct food groups. Use this to help them see the balance of foods they ate.

Cooking potatoes - Lesson 11

Children will:

- plan how to make a healthy potato dish.

Before this session you will need to ensure you have permission from parents/carers for the children to taste different foods. This is to ensure there are no allergies, religious or cultural reasons why the children cannot eat the food. You will also need to prepare the ingredients just before the session. They should be in small sample sized pieces. The children will need a paper plate or piece of kitchen roll to rest their samples on and some water to clear their pallets. You may wish to provide a sheet so they can record their thoughts on the samples. You will also need the **Potato salad** recipe.

Introduction

Re-cap what the children learnt about healthy eating in the previous session.
Explain to the children that foods in the different groups provide us with the different things our bodies need to be healthy. The *Bread, rice, potatoes, pasta and other starchy foods* group provides us with energy so we can be active, learn and play. Explain that they will be making a healthy potato salad. Their potato salad will be a healthy lunch after they have had a busy morning learning and working. Look at the ingredients on the potato salad recipe. Talk to the children about the ingredients:

- What is the main ingredient?
- What other ingredients are there?

Look at the **Healthy eating** PowerPoint. Ask the children which other foods they could add from different groups, e.g. peppers, cooked ham, herbs. Have a selection of ingredients for the children to taste, e.g. grated carrot. Discuss the tastes and textures of the different ingredients and how suitable they might be for the potato salad.

Task

5-11

Instruct the children to work in pairs or small groups to design their potato salads. They should consider which ingredients they think will go well together. They could draw and label their salads or make a written plan. They could use **The eatwell plate** worksheet 15 to help them consider a salad which contains ingredients from a variety of food groups. Ask the children to look at the method and decide who will do each part.

Summary

Ask the children to present what they have planned.

Why not…

- Get the children look in recipe books or the internet for ingredient ideas.
- Use some herbs you have grown at school.
- Find out what ingredients are in season at this time of year.

Cooking potatoes - Lesson 12

Children will:

- learn how to make a healthy potato salad and develop their cooking skills.

Before this session you will need to organise the equipment and ingredients. You will also need to set up the classroom and organise the children so the session is safe. You will need the **Potato salad** recipe.

For more information on organising cooking in primary schools go to www.foodafactoflife.org.uk *5-8* or *8-11*, *Cooking* module.

Introduction

Explain to the children that they will be making their potato salads. In advance of the lesson you will need to get the ingredients and equipment ready and set up the classroom. Following the recipe; the bullets below provide a summary of how your session might run:

- Introduce the recipe and the ingredients;
- Demonstrate the skills that will be used, e.g. cutting safely with knives, sniping with scissors;
- Talk to the children about what they will do, e.g. they could work in small groups to produce a dish taking a job each.

Task

Make sure the children are ready to cook. Ensure they have: tied back long hair, rolled up their sleeves; put on an apron and washed their hands. Make sure they are clear on what they will each be doing. It is helpful if children work in pairs so one child can check the other is working safely. Let the children make their potato salads. Stop the children during the lesson to check how they are getting on and share any important information.

Summary

Evaluate the dishes together as a class. Get the children to comment on the following:

- Appearance;
- Texture;
- Taste.

Talk to the children about anything they would do differently if they made the recipe again. How does it compare to there design (Lesson 11)?

Why not…

- Use the potatoes you have grown to make the dish.
- Try the other **potato recipes:** *Potato and rosemary bread rolls, Microwave gnocci with a simple tomato sauce, Mini ham and onion rostis, Mulligatawny soup* and *Stuffed spud.*

Healthy eating information

The eatwell plate is a pictorial food guide produced by the Food Standards Agency to help people understand and enjoy healthy eating. It shows the proportion and types of foods that we need to make up a healthy, balanced diet. The plate applies to most people, regardless of weight, height, ethnic origins and whether you are vegetarian or otherwise. The exceptions are children under two years of age because they need full-fat milk and more dairy product, and those under medical supervision.

Healthy eating is all about balance, which means that there are no good or bad foods. All foods can be included in a healthy diet as long as the overall balance of foods is right by achieving the correct intake of those nutrients that is important for health.

No single food contains all the essential nutrients the body needs to be healthy and function properly. We eat food to provide us with energy to live but the balance between how much carbohydrate, fat and protein we eat must be right for us to remain healthy. Too little protein can interfere with growth and other body functions, too much fat can lead to obesity and heart disease. Different foods provide different vitamins and minerals, therefore a healthy diet should include a variety of foods to ensure all the vitamins and minerals are provided. For example, dairy products such as milk and yogurts are great sources of calcium, but they are a poor source of vitamin C; citrus fruits are good sources of vitamin C, but they do not provide any iron.

The plate is divided into five food groups. Foods from the largest groups should be eaten most often and foods from the smallest group should be eaten least often. The guide is shaped like a dinner plate which has been designed to make healthy eating simpler to understand and interpret.

The Eatwell Plate shows the types of foods that fit into the five commonly accepted food groups and the proportions of these foods that should be eaten from each group. People should be encouraged to choose a variety of foods from the four largest groups every day to ensure that they obtain the wide range of nutrients their bodies need to grow, develop and function properly to stay healthy.

Fruit and vegetables we all need to eat at least five portions of these everyday. Fresh, frozen, dried, canned and juiced varieties all count. Fruits and vegetables are low in fat and high in fibre; they also provide a range of important nutrients which are essential to maintain health.

Bread, rice, potatoes, pasta and other starchy foods group should make up a third of your diet because they provide us with energy. We should all eat more of this group. Potatoes form part of this group.

The **Milk and dairy foods** group provides calcium and are very important in the diet for good bone health. These foods should be eaten in moderate amounts every day. Choose lower-fat options whenever you can, such as semi-skimmed milk, low-fat yogurt and reduced-fat cheese.

Meat, fish, eggs, beans and other non-dairy sources of protein foods provide protein for growth and development, as well as minerals such as iron, zinc and magnesium and also B vitamins. Leaner cuts of meat and lower fat versions of these foods should be included. Visible fat and skin should be trimmed from meat.

The smallest group – **Foods and drinks high in fat and/or sugar** – adds choice and palatability, but foods from this group should be used sparingly if they are eaten every day (such as butter and spreads), or not eaten too often (such as sweets and crisps).

It is not necessary to achieve this balance at each meal but it should be applied to food eaten over a day or even a week. The amounts that should be consumed will vary depending on energy needs (based on age, sex and physical activity levels), as well as appetite. Choosing different foods from within each group is also important as this adds to the range of nutrients consumed, as well as variety to the diet.

For further information about *The eatwell plate*, visit the Food Standards Agency website http://www.eatwell.gov.uk.

Eight tips for eating well

The eatwell plate is based on the 'Eight tips for eating well', which are published by the Food Standards Agency and provide practical guidance on ways to achieve a healthy, varied and balanced diet. They are:

1. **Base your meals on starchy foods.**
   We should aim to eat starchy foods such as potatoes, bread, rice and pasta with every meal. Starchy foods keep us full and provide us with energy, as well as fibre, calcium, iron and B vitamins. They should make up a third of our diet.

2. **Eat lots of fruit and vegetables.**
   Try to eat at least 5 portions of a variety of fruit and vegetables every day. Fruit and vegetables provide lots of vitamins, minerals and fibre which our bodies need to function properly.

3. **Eat more fish.**
   Fish is an excellent source of protein and contains many vitamins and minerals. It is recommended that we all eat two portions of fish a week, one of which should be oily fish, such as mackerel, salmon, trout and herring. These types of fish contains omega 3 fatty acids, which can help keep our hearts healthy.

4. **Cut down on saturated fat and sugar.**
   Eating too much saturated fat can increase cholesterol levels and the chance of developing heart disease, therefore try to avoid eating too many pies, pastries, hard cheeses, cakes and biscuits. Too many sugary foods and drinks can contribute to tooth decay, especially if you have them between meals.

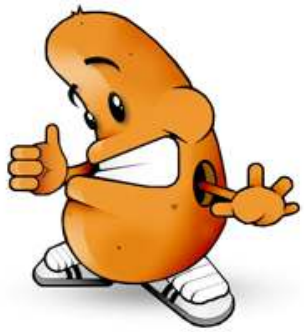
5. **Try to eat less salt (less than 6g a day).** †
   Keeping a normal blood pressure is important for your health. Eating too much salt may raise your blood pressure and lead to certain illnesses. Much of the salt in our diet comes from processed foods such as bread, breakfast cereals, soups, sauces and ready meals. Even if you do not add salt to your food, you can still be eating a high amount of salt.
   Children under 11 years have lower recommended amounts than adults.

6. **Get active and try to be of healthy weight.**
   To achieve a healthy weight, we need to balance the energy we get from food with the energy we use up through activity. If we take in the right amount of energy to meet our needs, we are said to be in energy balance and our weight will remain the same. If we take in more energy than we use up, the unused energy is stored as fat and we will gain weight. Physical activity such as walking, running or playing sport can help balance the energy we get from eating food to maintain a healthy weight.

7. **Drink plenty of water.**
   Around two-thirds of our body is made up of water. We lose water throughout the day when we sweat, breathe and use the toilet. Drinking enough water each day helps prevent headaches and dehydration. Remember not to drink too many soft or carbonated drinks that are high in sugar.

8. **Try not to skip breakfast.**
   Eating breakfast provides us with energy, as well as some important nutrients that we need for good health. For example, a healthy breakfast of wholegrain cereal and a glass of fruit juice, will give our body the energy and nutrients it needs to start the day. If you skip breakfast, you are more likely to fill up on snacks that are high in fat and/or sugar as you get hungry before lunch.

Potato information for teachers



The role of potatoes in the diet

Potatoes are low in fat, provide lots of vitamins and minerals and if eaten with the skin, and are a good source of fibre. Potatoes are known as starchy food. Starchy foods are those that mainly provide carbohydrate and should make up a third of our diet.

Along with other starchy foods, potatoes play an important role in a healthy balanced diet.

There are lots of different ways that potatoes can help add variety to the diet. Potatoes can be combined with different foods to create healthy, balanced meals.
For example …

- Leek and potato soup
- Potato salad
- Wedges with chilli
- Lancashire hotpot
- Jacket potato with beans
- Fish pie
- Shepherd's pie

When cooking with potatoes, try these tips to keep your dishes healthy:

- make mash with a little milk and no butter;
- boil and bake potatoes instead of frying;
- use vegetable oil when roasting;
- cut potatoes for roasting into bigger pieces;
- have wedges, rather than chips;
- do not add butter or creamy sauces.

A 180g jacket potato (skin and flesh) provides the following nutrients:

Energy	245 kcal/ 1045 kJ
Vitamin C	25.2 mg
Fibre	4.86 g
Protein	7 g
Carbohydrate	57g
Fat	0.36 g

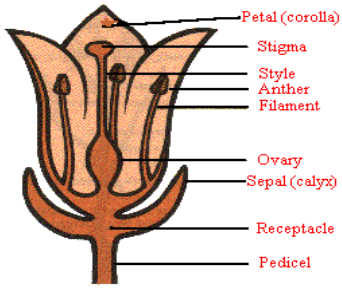
Carbohydrate - your main source of energy, needed for growth and activity.
Protein - helps the body grow and repair itself.
B Vitamins - needed to help the body to get energy from carbohydrate. They also help the nervous system, heart and skin.
Vitamin C - important to keep skin healthy and to heal any cuts or grazes.
Iron - helps blood carry oxygen around the body.
Fibre – helps the body get rid of waste.

Did you know..?
One medium-sized jacket potato with skin provides more vitamin C than two apples or an average serving of peas. It has even more fibre than either a bowl of branflakes, three slices of wholemeal bread or four bananas.

Cross-curricular ideas

Potato or bread?
Get the children to do some research to find out whether the following are types of potato or bread:
Maris Piper, King Edward, Bara Brith, Desiree, Muffin, Huffkin, Saxon, Stottie, Bannock, Nadine, Estima, Sally Lunn, Coburg, Wilja.

Pollination
If you are teaching pollination, why not use a potato plant as an example? Use the **Pollination** worksheet 16 and get the children to labels the different parts of the potato flower and explain how pollination works.



Graphs
Does rainfall make a difference to how well potatoes grow? Get your children to turn the following information into a graph and discuss the effect of rainfall on potato production. You will need to discuss how to label the axes and the scale to use. Suggestion: use vertical axis for rainfall and the horizontal axis for Kg of potatoes.

Potato crop kg per 10,000sq metres	44,000	48,000	36,000	38,000	46,000
Rainfall (mm)	98	146	37	101	68

Where have my potatoes travelled from?
Provide the children with a selection of potato packaging, wrappers or bags from local shops. Get them to look at where the potatoes have been grown and where they are packed. Provide some photocopies of UK and world maps (which you need will depending on the locations shown on the potato packaging). Get the children to mark on their maps where their potatoes were grown, packed and sold. Can they calculate the distance their potatoes have travelled? If you are lucky enough to have a local farm shop, work out how far away it is from school.

Acrostic poems
Work with the children to create a bank of potato related vocabulary, e.g. planting, harvesting, Rooster, Charlotte, baked, boiled. Set the children the task of writing an acrostic poem for the word 'potato'.

Potato survey
Set the children the task of finding out the most popular potato dish of the children in your school. They could use this information to create a graph and answer the following questions. Do most people in your school like a certain potato dish? Do younger children prefer different dishes from older children? What is the least favourite potato dish in your school?

Potatoes for lunch
The children could interview the kitchen staff about potatoes to find out more about the ways they can be cooked and the dishes they can be used to make.

Sequencing
Take some of the potato recipes from the website, cut the method into strips and remove the numbering. Get the children to re-assemble the recipe in order. The children could illustrate the different steps.

Recipe writing
Get the children to design their own potato recipes. They could design seasonal, festive or themed jacket potato fillings, e.g. Spring, Christmas or Italian fillings.

Potato printing
Why not make some potato prints? Before the lesson, cut some potatoes in half and then cut different patterns and shapes onto each. Caution: only adults should do this and care should be taken when cutting shapes into the potato. Give the children some paper and paint and let them create their own potato print pictures.

Potatoes around the world
Find out about potatoes around the world, e.g. What is the word for 'potato' in other languages? What are the types of potato grown in other countries? What are the dishes and meals made with potatoes in other countries?

UK curricula links for potato lessons 1-12

Lesson	Age	England	Northern Ireland	Scotland	Wales
1	5-7	**Science** Sc 2: 3b	**Foundation Stage: The World Around Us** - Show curiosity about the living things…in the environment.	**Science** SCN 1- 01a SCN 1 – 02a	**Knowledge and Understanding of the World:** - Learn the names and uses of the main external parts of the human body and plants.
	7-11	**Science** Sc 2: 1b, 3b, 3c, 3d	**The World Around Us** **KS1** – Ways in which living this depend…on their environment. **KS2 –** Ways in which…plants depend on the features and materials in places…	**Science** SCN 2 – 01a SCN 2 – 02b	**Science** Interdependence of organisms: 4.
2	5-7	**Science** Sc 1: 2h Sc 2: 1c, 3a, 3c	**Foundation Stage: The World Around Us** -Understand that some things change over time **-**How do living things survive?	**Science** SCN 1 – 03a	**Knowledge and Understanding of the World:** - Make comparisons… - Identify some plants that live in the outdoor environment.
	7-11	**Science** Sc 1: 2f Sc 2: 1c, 3a	**The World Around Us** **KS1** – Ways in which living this depend…on their environment. **KS2 –** Ways in which…plants depend on the features and materials in places…	**Science** SCN 2 – 01a SCN 2 – 14a	**Science** Developing**:** 2 Interdependence of organisms: 4,6.
3	5-7	**Science** Sc 1: 2d, 2f, 2h Sc 2: 3a	**Foundation Stage: The World Around Us** **-** What kind of changes happen, have happened or might happen? - How can we make change happen?	**Science** SCN 1 – 03a	**Knowledge and Understanding of the World:** - Exploring and experimenting. - Making observations and measurements… - Making comparisons…
	7-11	**Science** Sc 1: 2d, 2f,2i Sc 2: 3a	**The World Around Us** **KS1** – Ways in which living this depend…on their environment. **KS2 –** Ways in which…plants depend on the features and materials in places… **KS 1 & 2** - Ways in which change occurs…	**Science** SCN 2 – 02b	**Science** Enquiry: 4. Developing**:** 2., 4. Interdependence of organisms: 6.
4	5-7	**Design and technology** 4a **Science** Sc 3: 1d	**Foundation Stage: The World Around Us** - Understand that different materials behave in different ways, have different properties and can be used for different purposes.	**Science** SCN 1- 15a **Literacy and English** LIT 1 – 24a **Technologies** TCH 1 – 15a	**Knowledge and Understanding of the World:** - Understand how some everyday materials change in shape when squashed …heated or cooled.
	7-11	**Design and technology** 4a **Science** Sc 3: 1a	**The World Around Us** **KS1 & KS 2 –** Ways in which changes occur…	**Science** SCN 2 – 15a **Literacy and English** LIT 2 – 24a **Technologies** TCH 2 – 15a	**Science:** The sustainable Earth: 3, 4, 5.
5	5-7	**English** En 1: 1c, 2b, 2e, 3d, 8d, 9b	**Foundation Stage:** **Language and Literacy** - talk with adults… - asking and answering questions.	**Literacy and English** LIT 1-09a	**Language, literacy and communication skills:** - Listen and respond appropriately and effectively… - Engage as individuals and in groups, talking to different audiences…

	7-11	**English** En 1: 1c, 2b, 8c, 9a	**Language and Literacy** **KS1** **–** Devise and ask questions… - Participate in talking and listening… **KS 2** – - Identify and ask appropriate questions… - Listen and respond…	**Literacy and English** LIT 2 – 09a	**English:** Oracy: Skills: 1, 2. 3. Range: 1, 4.
6	**5-7**	**Science** Sc 3: 2a, 2b.	**Foundation Stage: The World Around Us** - Understand that different materials behave in different ways, have different properties and can be used for different purposes. - How can we make change happen?	**Science** SCN 1 – 15a	**Knowledge and Understanding of the World:** - Understand how some everyday materials change in shape when squashed …heated or cooled.
	7-11	**Science** Sc 3: 2b, 2f	**The World Around Us** **KS1 & KS 2 –** Ways in which changes occur…	**Science** SCN 2 – 15a	**Science:** The sustainable Earth: 3, 4, 5.
7	**5-7**	**Art and design** 2c **ICT** 3a	**Foundation Stage: The Arts** - Use thoughts and ideas as a base for visual work.	**Technologies** TCH 1- 03a TCH 1 - 04b	**Creative Development:** - Mix, shape, arrange…materials to…express their ideas…
	7-11	**Art and design** 2c **ICT** 3a	**The Arts** **KS 2 –** Take individual thoughts and ideas as the inspiration for visual work.	**Technologies** TCH 2 – 03a TCH 2 – 04b	**ICT:** Create and communicate information:1. Art and design: 2.
8	**5-7**	**Geography** 2c	**Foundation Stage: The World Around Us** -What is in my world?	**Social Studies** SOC 1 - 12b SOC 1 – 14a	**Knowledge and Understanding of the World:** - Use atlases and globes.
	7-11	**Geography** 2c **ICT** 1a, 1c	**The World Around Us** **KS 1 –** Features of the immediate world… **KS 2** – Features of, an variations in places…vegetation …life.	**Social Studies** SOC 2 – 14a SOC 2 – 12a	**Geography** Locating places, environments and patterns: 1, 3. **ICT** Find and analyse information: 2, 3.
9	**5-7**	**History** 1a, 5	**Foundation Stage: The World Around Us** **-** What kind of changes happen, have happened or might happen? **The Arts** - Use thoughts and ideas as a base for visual work.	**Social Studies** SOC 1 – 04a **Technologies** TCH 1- 15a	**Knowledge and Understanding of the World:** **-** Sequence events…
	7-11	**History** 1a, 4a, 5c	**The World Around Us** **KS1 & KS 2 –** Ways in which changes occur… **The Arts** **KS 1& 2 –** Take individual thoughts and ideas as the starting point/inspiration for visual work.	**Social Studies** SOC 2 – 06a **Technologies** TCH 2 – 15a	**History** Chronological awareness: 1. Historical enquiry: 3. Organisation and communication: 1.
10	**5-7**	**Science** Sc 2: 2b, 2c **PSHE** 3a	**Foundation Stage: The World Around Us** -How do living things survive? **Personal Development and Mutual Understanding** - The importance of keeping healthy..	**Health and wellbeing** HWB 1 – 30a	**Personal and Social Development...:** - Develop and understanding that …the right types of food and drink are important for healthy bodies. - Activities that allow them to

			- …how to care for his/her own body...		make healthy choices…
	7-11	**Science** Sc 2: 2b **PSHE** 3a	**Personal Development and Mutual Understanding** **KS 1 –** Strategies and skills for keeping themselves healthy and safe. **-** Recognising and valuing the options for healthy lifestyle. **KS 2 –** How to sustain their health and growth… - Understanding the benefits of healthy lifestyle.	**Health and wellbeing** HWB 2 – 30a	**Science** Interdependence of organisms: 2 **Design and technology:** Food: 9.
11	**5-7**	**PSHE** 3a **D&T** 1a, 1d ,1e	**Personal Development and Mutual Understanding** - …how to care for his/her own body... **Language and Literacy** - Talking about their work…	**Health and wellbeing** HWB 1 – 30a **Technologies** TCH 1 – 11a	**Creative Development:** - Make choices when choosing materials and resources. - Design and make simple products… **Personal and Social Development...:** - Activities that allow them to make healthy choices… - Activities that allow them to use their senses…
	7-11	**PSHE** 3a **D&T** 1a, 1c, 1d	**Personal Development and Mutual Understanding** **KS 1 –** Strategies and skills for keeping themselves healthy and safe. **-** Recognising and valuing the options for healthy lifestyle. **KS 2 –** How to sustain their health and growth… - Understanding the benefits of healthy lifestyle. **Language and Literacy** **KS 1 –** Express thoughts feelings and opinions… **KS 2 –** Share, respond to and evaluate ideas…	**Health and wellbeing** HWB 2 – 30a **Technologies** TCH 2 – 11a	**Design and technology:** Food: 7, 8,9. Designing: 5.
12	**5-7**	**D&T** 2a, 2d, 2f, 3b	**Foundation Stage: The World Around Us** - Understand that materials can be joined and assembled in different ways. -Be aware of …technological tools and know how to use some of these safely.	**Health and wellbeing** HWB 1 – 30a HWB 1 – 35a **Technologies** TCH 1-11a	**Creative Development** - Use a variety of materials and tools… - Mix, shape, arrange and combine materials… - Reflect on their own and others' work. **Personal and Social Development...:** - …independent in their personal hygiene needs…more aware of personal safety.
	7-11	**D&T** 2a, 2d, 2f, 3a	**The World Around Us** **Progress in learning:** **(KS1-KS2)** – from using tools, components and materials to design and make to combining, designing and making skills and techniques…to present solutions.	**Health and wellbeing** HWB 2 – 30a HWB 2 – 35a **Technologies** TCH 2 – 11a	**Design and technology:** Making: 2, 3, 6. Food: 7.