



WORKING
TOGETHER TO
INSPIRE AND
EMPOWER
PEOPLE



Smith

AND THE HEALTHY METER



TEACHERS NOTES

INTRODUCTION

We hope you and your pupils enjoy WWF's 'Green Ambassador' storybook "Smith and the Healthy Meter". This storybook is the first in a series designed to introduce 5-7 year olds to key environmental ideas in a fun and accessible way. Each storybook will focus on one Green Ambassador character and the environmental theme that they represent.

WWF's Green Ambassadors scheme aims to put young people at the heart and in the lead of caring for nature in their schools. As 'Green Ambassadors', pupils are representatives on behalf of the planet within their school and community, and equipped with relevant knowledge and skills, they can inspire and motivate others to do their bit by acting as environmental citizens.

The storybook is designed for group reading sessions led by the teacher or TA, and is intended to link to curriculum topics relevant to 5-7 year olds. There are examples of activities for school and home at the end of each book, as well as a new vocabulary list.

On the following pages, you will find useful background information about the ideas introduced in the storybook to help you incorporate these storybooks into your lesson planning and to answer pupils' questions.

We hope the story and the discussions it could lead to will support your work in the classroom and lay the foundations for developing an understanding about how our choices and our actions – around food, energy, water, transport etc – affect our lives and the planet.

If you have any feedback that could help us improve the storybooks or these resources, please email us at greenambassadors@wwf.org.uk



THIS STORY

This storybook aims to introduce 5-7 year olds to issues of food and sustainability. Pupils meet the Green Ambassador character Smith, an energetic, enthusiastic, team player, and food lover who's passionate about growing food.

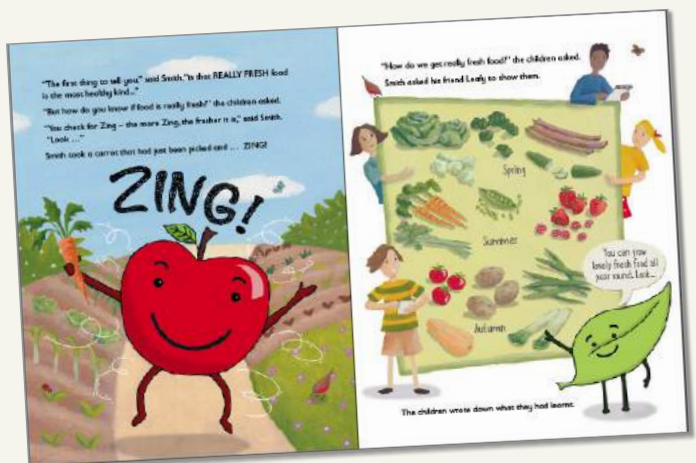
Smith is neither a boy nor a girl, male or female. Smith is just Smith – and the same goes for the other Green Ambassador characters too.

"Smith and the Healthy Meter" is about food; healthy food and where it comes from. One of the issues with food is that it can be hard to easily measure or to 'see' how good a particular food is for you – we often have to rely on experts to tell us. The food that most appeals to us is often food that isn't very good for our bodies. Many of the foods we yearn for aren't very good for the planet either.

The story is about how Smith wants to build a 'healthy meter' that measures how healthy food is and how good it is for the planet. The other Green Ambassador characters have physical gadgets – meters – for measuring energy use, water use, and speed / distance travelled.

With the help of the four children in the story, we discover that Smith doesn't need a healthy meter: Smith knows what's healthy, what's good for the planet and what's not. When it comes to food, Smith actually is a living 'healthy meter'.

On the way to this realisation, we see the children learning from Smith about healthy food that's good for you and good for the planet.

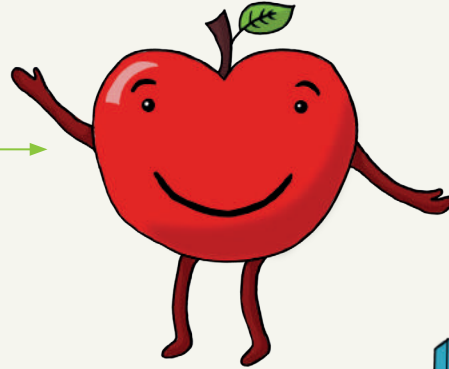


ABOUT THE GREEN AMBASSADORS

Each Green Ambassador character represents a different environmental theme:

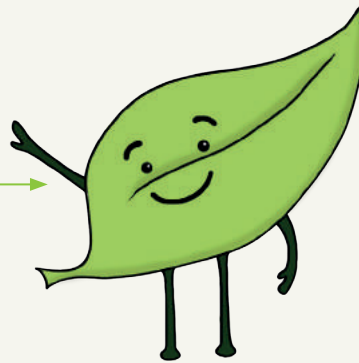
SMITH

is mad about food, where it comes from, which foods are healthy and which are not, and about the impact that producing food has on the environment and the planet.



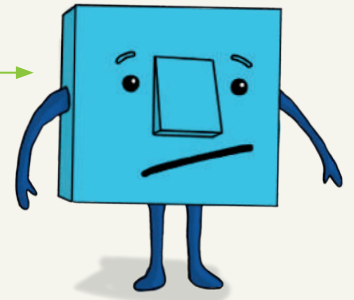
SWITCH

is energised about energy, how it is produced, the impact it has on the planet, and things we can all do to be more aware about the energy we use.



LEAFY

is wild about living things. Leafy has a cameo in Smith's story, advising the children on the different vegetables and fruit that grow in the different seasons.



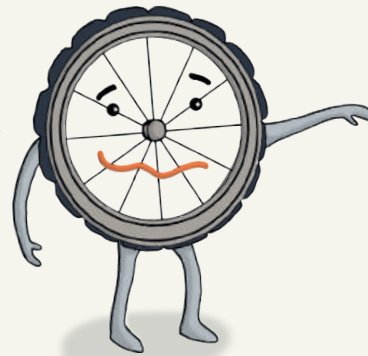
CRUSH

is crazy about recycling. Crush hates waste – why throw something away when it can be used again?



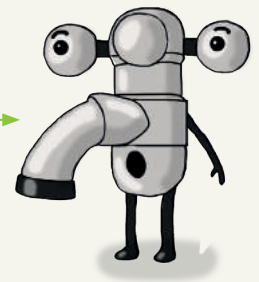
WHEEL

is spinning about how we get around. Wheel would prefer you to walk, run, cycle or skate rather than get into a car – it's good for you and good for the planet.



TAP

gushes about water use. Tap teaches us how precious water is, and the great effort needed to make clean water and the simple ways to avoid wasting it.



To find out more about the Green Ambassador characters please visit WWF's dedicated schools website – schoolzone.wwf.org.uk

There's also a short film featuring the Green Ambassador characters that you can show your pupils – watch it at schoolzone.wwf.org.uk/green-ambassador-short-film

KEY IDEAS IN THE STORY

Green Ambassadors are in a great position to encourage those around them to eat in a way that is healthy for people and healthy for the planet. We hope that this story and the key messages it contains will give them the knowledge, motivation and enthusiasm to spread that message.

Food choices can be a sensitive topic – for individuals and for different cultures and religions. We have therefore looked to reinforce established food and health messages, while starting to build children’s understanding that food is a key environmental issue. There is so much that can be done to produce and consume food in a more sustainable way that is better for us, and less harmful to our shared planet. This storybook offers the following key messages:

1. FRESH IS BEST

Really fresh food contains what Smith calls ‘Zing’, and doctors and nutritionists agree that fresh vegetables and fruit are an essential – and often neglected – part of a healthy diet. The government’s 5 A Day campaign ([visit nhs.uk/livewell/5aday/pages/5adayhome.aspx](http://visit.nhs.uk/livewell/5aday/pages/5adayhome.aspx)) is part of a wider effort to increase the amount of fresh fruit and veg people eat. Our lifestyles and supermarket economies of scale make buying cheap processed foods increasingly attractive. But generally, the more processing our food goes through before it reaches our plate, the fewer vitamins and minerals it contains.

PROMPT QUESTIONS FOR PUPILS:

- How can you tell if a vegetable or a fruit is fresh or not?
- Where can you find fruit or veg that is as fresh as it possibly can be?
- Why do you think that fresh fruit and veg are so good for you?

2. GROW YOUR OWN

One way to get the very freshest food is to grow your own, and happily most children love growing things and being outdoors. A school veg garden, if your school doesn’t already have one, is a great activity and resource that can spark a lifelong interest in fresh food, growing things and being outdoors. Many children today grow up with limited awareness of where their food comes from: growing veg is one way to grow that awareness. If outdoor space is limited at school or at home, it is still possible to grow fresh food – and we suggest some ideas for planters in the storybook.

We want to encourage children to eat the freshest fruit and veg they can, and to have a go at growing their own. But it’s important that they aren’t put off eating any fruit or veg, so make sure they are still up for eating frozen and tinned too!

PROMPT QUESTIONS FOR PUPILS:

- Has anyone ever eaten a fruit or vegetable that they have grown themselves – what was it, what did it taste like?
- What fruit or vegetable would you most like to grow if you had the chance?
- Where could you grow some fruit and veg at school?

3. CELEBRATE THE SEASONS!

Growing veg you get different fresh food in the different seasons. In contrast, most supermarkets sell the same fresh fruit and vegetables all year round – relying on imports from other countries during the winter months when much less is growing in the UK. An understanding of the growing season in this country is an important idea that links to the importance of knowing where our food comes from.

PROMPT QUESTIONS FOR PUPILS:

- What are the names of the four seasons - and can you think of a fruit or a vegetable that grows during that season?
- For instance, what fruits are likely to be ripe and ready to eat in autumn?
- What about in summer?



4. BALANCED MEALS RULE!

Eating balanced meals is good for you, which is one reason why the Five A Day campaign stresses the importance of fruit and vegetables and many schools will be familiar with the Eatwell Plate. WWF's Livewell plate (www.wwf.org.uk/what_we_do/changing_the_way_we_live/food/livewell_2020) also shows the proportions of different foods that make up a balanced diet but builds on the Eatwell Plate by showing how we can balance our diet in a way that is healthy for us and the planet. One of the largest slices of the plate is for fresh fruit and veg. On both, the share of meat and dairy that is healthy is smaller than many people imagine.

PROMPT QUESTIONS FOR PUPILS:

- › What are your favourite kinds of food?
- › What are the different types of food that we eat – can you name them??
- › Why do you think we need to eat a mix of different food – can you think of any reasons?

5. CHECK YOUR SOURCES!

How food is grown affects the planet, so it's important to find out where it comes from. This is a big topic and in the Smith storybook we are just picking one example – of beef that is fed by clearing rainforest. The picture suggests that the rainforest is cleared for grazing. The reality is that most clearing of this kind is to grow crops to feed livestock. There are many other issues about where food comes from and how it is grown – for example, the contribution to climate change (see 'Food and our planet' in the 'Background information' section), overfishing and by-catch (unwanted fish and other marine creatures trapped by commercial fishing nets and usually thrown back into the sea dead or dying), the use of pesticides and fertilisers versus organic food – which are perhaps topics for older pupils to explore. With this story we want to plant the seed that it is important to know where your food comes from.

PROMPT QUESTIONS FOR PUPILS:

- › What are your favourite foods and what are they made of?
- › How could you find out where a particular ingredient comes from – any ideas?
- › How could you find out if something was grown in a way that didn't harm the planet?



ACTIVITY - DESIGN YOUR OWN LIVEWELL MEAL AND LUNCHBOX

In this activity pupils will learn about different kinds of foods and the recommended proportions of different foods that make a healthy, balanced plate of food. It introduces the Livewell principles – healthy food that’s good for the planet.

KEY VOCABULARY

Healthy, unhealthy, balanced diet, food groups / food types, plant-based foods.

LEARNING OUTCOMES

Pupils will develop their speaking and listening skills; they will learn about healthy food and that their food choices can have an effect on the environment.

PREPARING FOR THE ACTIVITY

You will need to collect a variety of foods – or photographs of different kinds of foods, food packets or tins. You will need examples of all the different food groups that will be familiar to your pupils – fruit and veg, frozen, bread, pasta, rice, cereal, milk, yoghurt, chips, biscuits, nuts and seeds, meat, fish, beans and pulses.

You will need also need to project or display the Livewell Plate (or the Eatwell Plate) and the list of Livewell principles. You will need printed copies of the blank plate and the blank lunchbox.

Ask pupils to think about their favourite foods, and use the resource sheet ‘What type of food is that?’ to help them work out which food group they belong to.

3. Talk about proteins

When looking at dairy and meat sections, you can talk about other sources of protein such as beans, pulses, nuts and seeds.

4. Talk about sugar and salt

Explain that eating too much sugar and salt are not good for you. They are found in bread, ketchup, baked beans as well as obvious treats like biscuits and crisps.

5. Design a healthy plate or lunchbox

Using the Livewell plate or lunchbox worksheets ask pupils to design a school dinner that would be healthy for them to eat. Get pupils to share and discuss their ideas. Which items would pupils most like in their lunches? Which meals are particularly well balanced?

6. Create a display for the classroom or for the school

Pupils could work together to make an annotated display for the classroom or that could be put on the wall in the school dining hall.

WHAT TO DO

1 Talk about being healthy

Start by talking about what we do to be healthy – sleep, exercise and food. Ask pupils what they understand about the terms ‘healthy’ and ‘unhealthy’ and agree on a shared definition. Talk about food and health and discuss how a healthy diet is made up of different foods as shown on the Livewell plate.

Explain that what we eat is not only important for our health but for the health of the planet too. Because what we grow and how we grow it has a big impact on the world around us. Depending on children’s level of understanding you could explain that producing our food affects wildlife, habitats, our water supply and even things like global warming. You could show children the ‘Livewell guide to a healthy plate’.

2. Name the food groups

Name each food group and ask the children which foods go into each group. Discuss which are the largest and smallest groups and what the balanced plate is telling us.



THE LIVEWELL PLATE



SIMPLE FOOD RULES FOR HEALTHY PEOPLE, HEALTHY PLANET

WWF'S LIVEWELL PRINCIPLES

LIVEWELL
1

Eat more plants

- enjoy vegetables, fruits and whole grains

LIVEWELL
2

Eat a variety of foods

- have a colourful plate!

LIVEWELL
3

Waste less food

- one third of our food is lost or wasted

LIVEWELL
4

Moderate your meat consumption

- try other sources of protein such as peas, beans and nuts

LIVEWELL
5

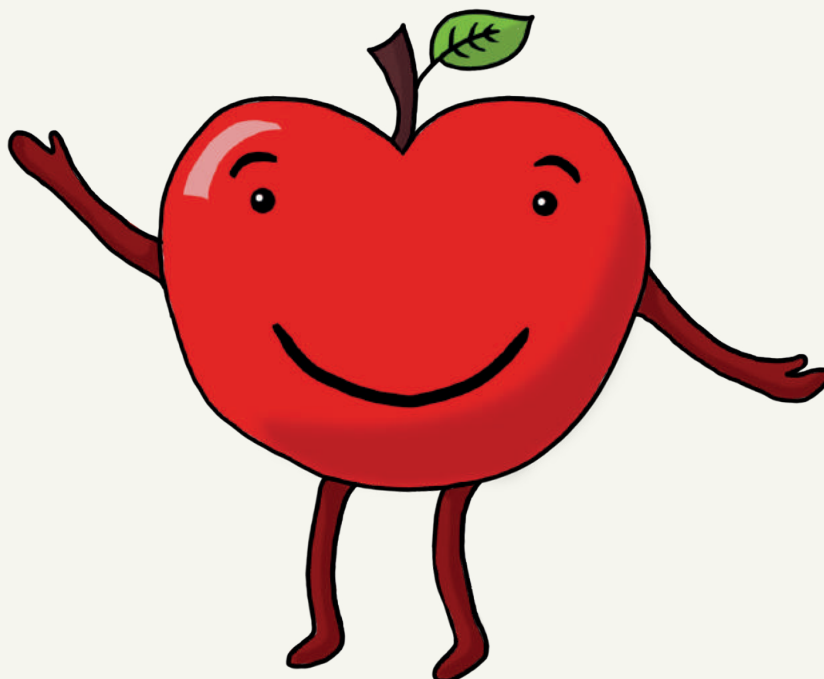
Buy food that meets a credible certified standard

- consider MSC, free-range and fair trade

LIVEWELL
6

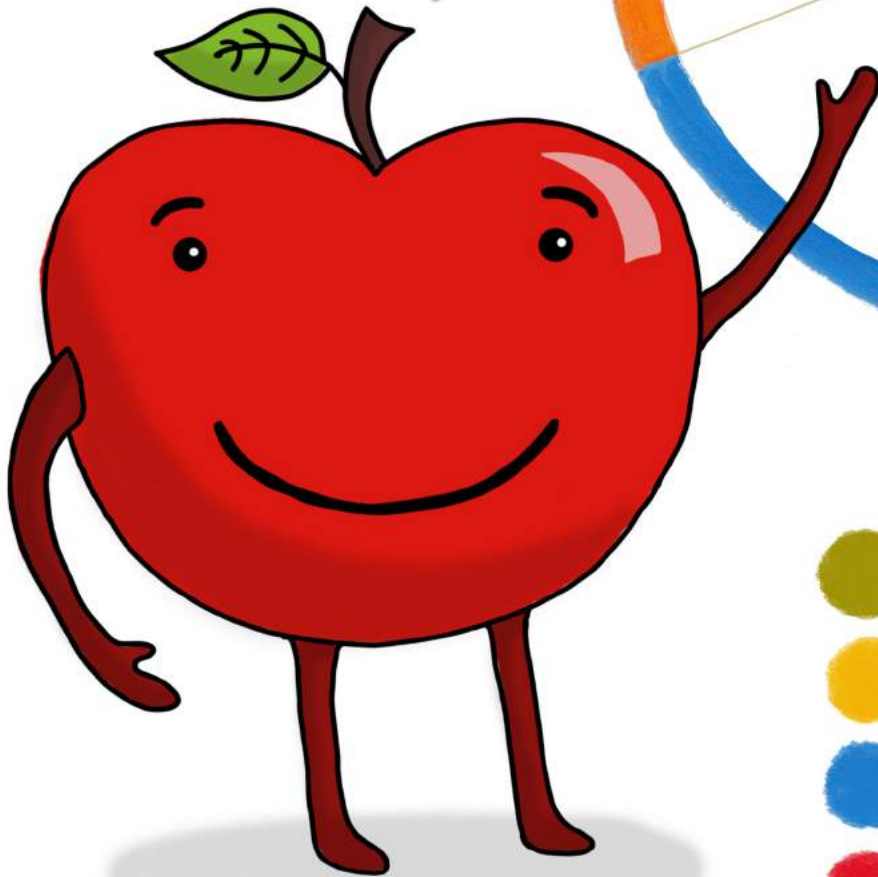
Eat fewer foods high in fat, salt and sugar






- keep sweet and salty foods for occasional treats.



WHAT TYPE OF FOOD IS THAT?

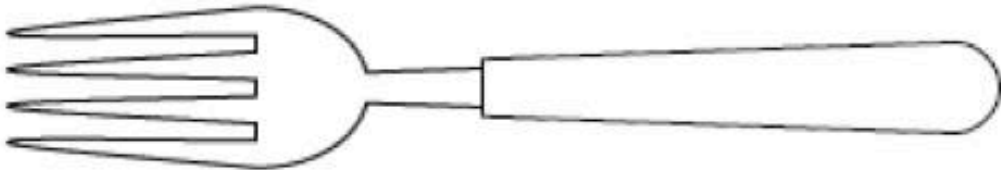
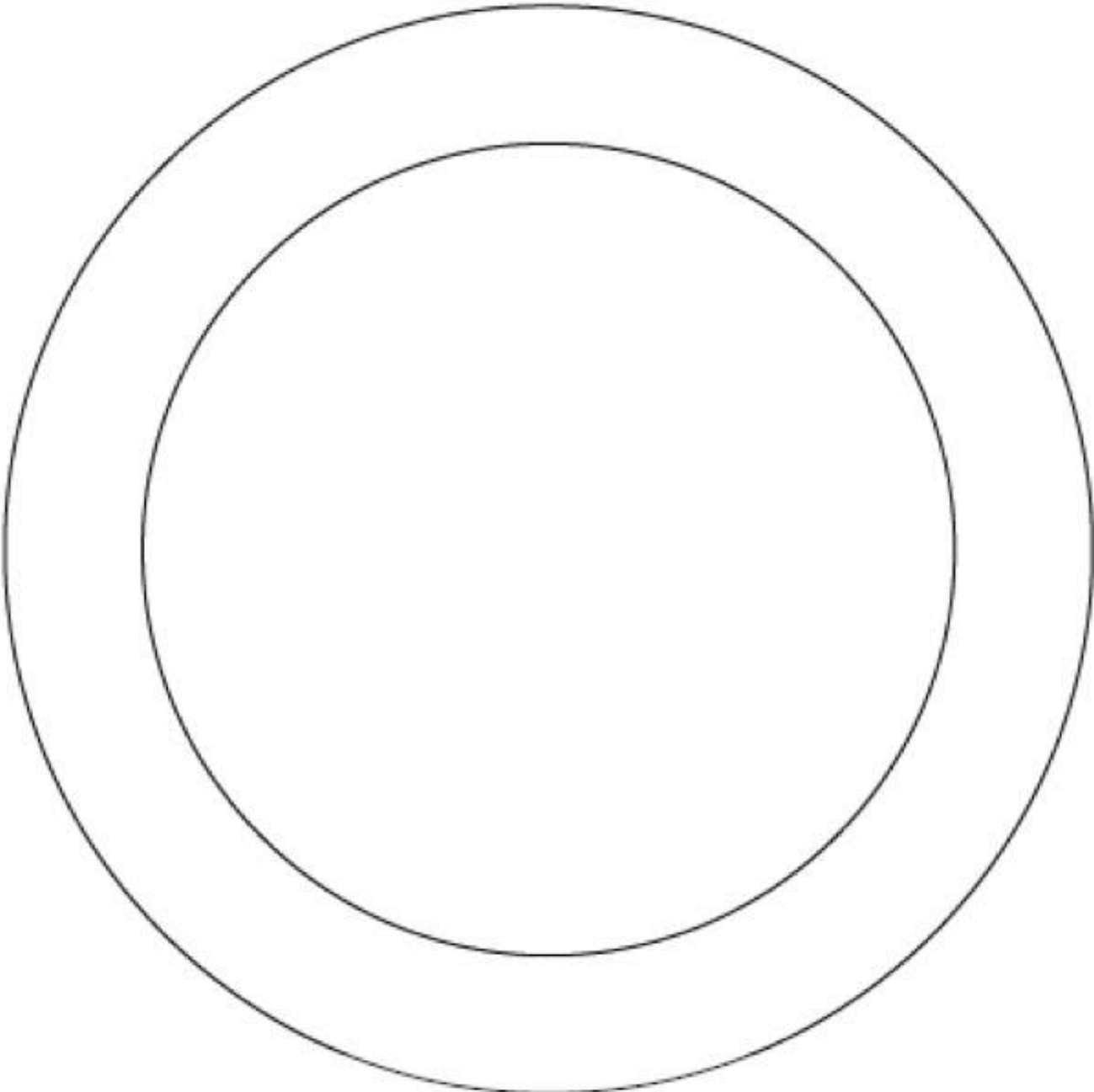
First, draw pictures of all your favourite foods. See if you can put each kind of food in the right place on the plate.



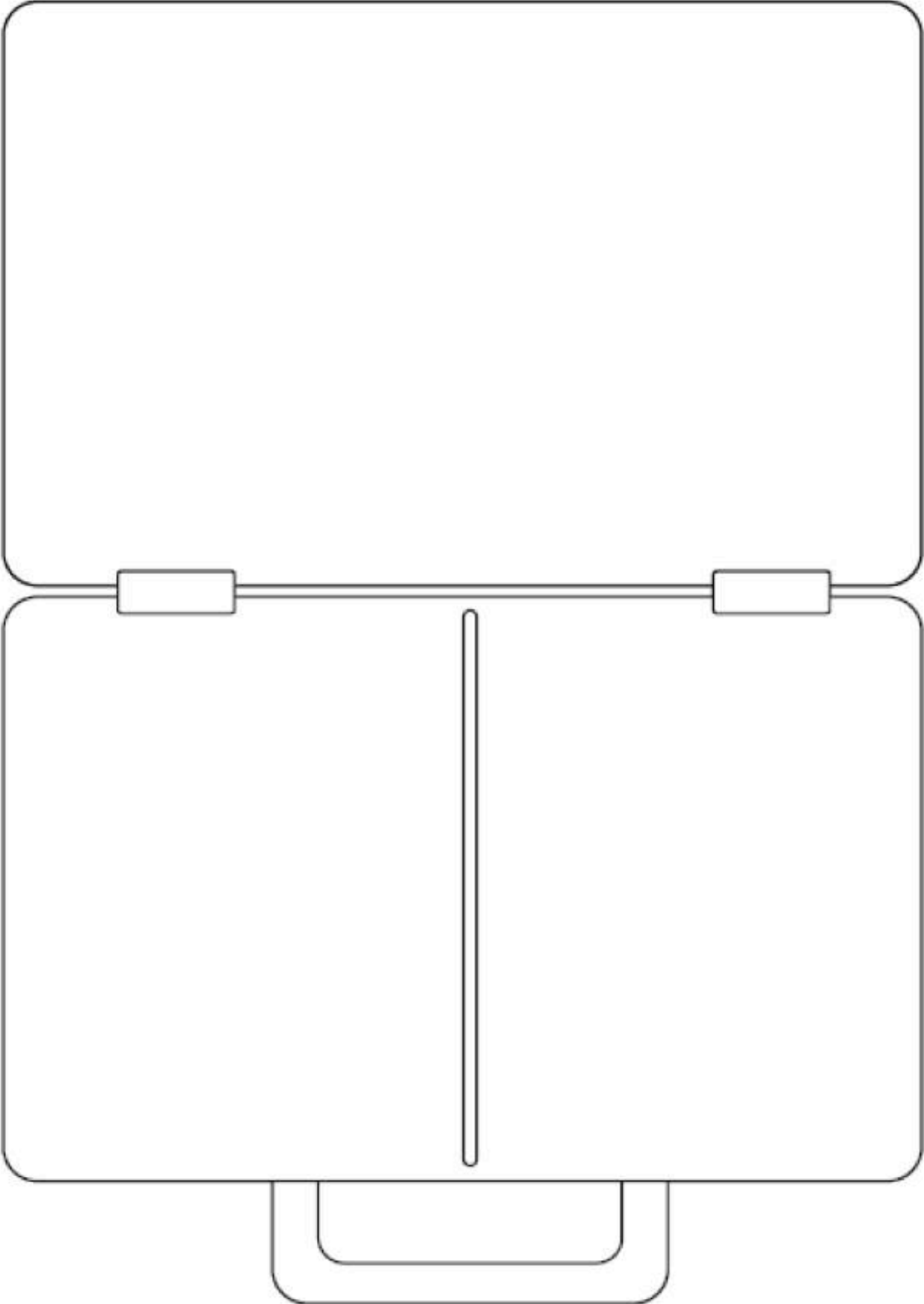
-  Fruit and vegetables
-  Grains, cereals and potatoes
-  Dairy products
-  Meat, fish, nuts and eggs
-  Fats and sugars

Now ask your teacher if the meal you have made is a healthy one.

A HEALTHY SCHOOL DINNER



A HEALTHY LUNCH BOX



BACKGROUND INFORMATION

Food – a basic need, but at what cost?

Food is something we all need and our amazing planet provides enough of it to feed every one of us. But the way we are feeding the world is putting enormous pressure on the climate and ecosystems.

Every living thing needs food for life. Our food gives us the energy we need to carry out our daily lives and the carbohydrates, fats, proteins, vitamins and minerals that we need to stay healthy. The food we eat also links us to the family and friends with whom we share food, and with food producers in the UK and around the world.

Our planet, Earth, provides us with all our food. But the food we eat and the ways in which we are growing, producing and processing it has a massive impact on our planet, contributing substantially to climate change and biodiversity loss. Moreover, access to food is tragically unequal across the globe. Approximately 1 billion people in the world are undernourished while another 1.5 billion people are obese or overweight.

FOOD AND OUR PLANET

Today 60% of the world's land surface is used in agriculture and food production. Advances in technology since the Second World War have meant that farming has become more mechanised. Larger areas of land are farmed by fewer people. Chemicals once used in war have been put to new uses as agricultural fertilisers and pesticides. And scientists have begun to develop new crops that give higher yields.

As agriculture has intensified, and monoculture and factory farming have become more widespread, the environment has paid a heavy price. Biodiversity has taken a real hit. There has been an alarming decline in birds, butterflies and other wildlife in the UK countryside over the past 50 years and this trend is echoed around the world.

Food production is also responsible for 30% of global greenhouse gas emissions making it a hefty contributor to climate change, beating even transport. The emissions come from every stage of the chain – the conversion of land to agricultural use as forests are cut, the energy used to make fertilisers, pesticides and farm machinery, the impact of agriculture on the soil (a natural carbon store), food processing, transport, refrigeration, retail, domestic use of food, and waste from all the different stages.

Some of our food choices are destroying the homes of animals on the other side of the world. For instance, the cultivation of soy (mainly fed to livestock) and palm oil (used in many processed foods) is one of the main causes of deforestation in South America and South-east Asia. Agriculture is the second main cause of deforestation in the Amazon. In 2006, about 6 million of the 11 million hectares of oil palm plantations globally were in Indonesia, home to the orang-utan. In Asia, fierce competition for living space has led to a loss of forest cover meaning that there has been a huge decline in the numbers of Asian elephants in the wild. They are now an endangered species.

Waste is also a major issue – in fact, globally around a third of the food that's grown is wasted. Households in the UK throw away 6.7m tonnes of food every year – a third of all the food we buy. If we tackled issues such as the waste of foods by consumers and industry, and improved the distribution and consumption of food and the support given to smallholder producers, then we would take some of the pressure off our planet.

More from WWF on food at wwf.org.uk/what_we_do/changing_the_way_we_live/food

FOOD AND PEOPLE

The world's population has doubled since 1960, and is predicted to increase to over nine billion by 2050 yet we already produce enough to feed a population in excess of this number. The problem rests in what is grown, where, and for whom and – in some parts of the world – in the choices we make around what and how much we eat.

Today close to a billion people – often in low income countries – are badly undernourished and many more do not have enough food to lead a full and healthy life. Conversely, 65% of the world's population live in countries (all high and most middle income) where being overweight or obese kills more people than being underweight – for example through type 2 diabetes, cardiovascular disease or cancer.

In the EU, the estimated costs associated with being overweight or obese vary from 1 – 5% of national health care budgets. In the UK £4 billion is spent by the NHS every year treating diabetes with a further 16 billion being spent on diet related social disease – sickness, reduced productivity, and poor grades in school. This critical situation has arisen since the 1940s when the 'Western' diet began to change to one that is high in meat, dairy products and processed food – much of which is packed with salt and sugar – coupled with overconsumption and less active lifestyles.

A MATTER OF CHOICE

One of the biggest problems for the health of people and planet is what we choose to eat.

One example of this is our large appetite for meat in Western diets. In Europe, the average person consumes 85kg of meat a year compared to the 25kg eaten by the average person living in a developing country. Thirty per cent of croplands are used to grow food for livestock and over 40% of the world's grain harvest is fed to animals. Vast areas of forest and savannah areas are being destroyed as land is converted to agricultural production. Predominantly meat-based diets, like we have in the UK, are very inefficient and place the planet under increasing stress. Producing 1kg of beef requires

15 times as much land as producing 1kg of cereals, and 70 times as much land as 1kg of vegetables. Moreover, livestock produces another major contributor to climate change – methane. We need a healthier approach to what we eat and a more sustainable approach to feeding the planet.

HEALTHY PEOPLE, HEALTHY PLANET

At the moment we are using nature's gifts as if we had more than just one Earth at our disposal. Globally, we're using the equivalent resources of 1.5 planets to support our activities. By taking more from our ecosystems and natural processes than can be replenished, we are jeopardizing our very future.

If we are going to safeguard the future of our planet and ourselves we need to build a sustainable future. Sustainability is a way of life that allows people to meet their needs and enjoy a good quality of life while allowing nature to thrive and protecting the planet for future generations.

BEING SUSTAINABLE MEANS:

- **caring for yourself**
- **caring for each other – your family, friends, your school community and people in other countries**
- **caring for nature and the environment now and for the future.**

Sustainability is something we should all be aiming or in order to help protect the planet.

THE LIVEWELL APPROACH TO FOOD

At the moment we are using nature's gifts as if we had more than just one Earth at our disposal. Many pupils in your school are probably familiar with the government's Eatwell Plate. It shows the proportions in which different foods should be eaten to make up a balanced diet. It suggests that a healthy diet should contain more fruit and vegetables and far less meat and dairy than most people in this country consume. The Livewell plate, developed by WWF, uses the Eatwell model as its basis but it focuses on sustainability as well as health. Products from farmed animals – meat and dairy products such as milk and cheese – are among the most energy-intensive and greenhouse-gas intensive food products of all. The Livewell diet involves replacing more meat with

plant-based foods and drinks. It's a healthy and affordable diet which would lead to a 25% cut in greenhouse gas emissions from food production.

THE LIVEWELL APPROACH HAS SIX SIMPLE PRINCIPLES:

- 1. Eat more plants** – enjoy vegetables and whole grains!
- 2. Eat a variety of foods** – have a colourful plate!
- 3. Waste less food** – globally and in the UK around a third of the food that's grown is wasted.
- 4. Moderate your meat consumption, both red and white** – enjoy other sources of proteins such as peas, beans and nuts.
- 5. Buy food that meets a credible certified standard** – if you are eating fish, you can make a positive difference by checking that it is certified by the Marine Stewardship Council (MSC). Look for the blue tick, which guarantees that it comes from a well-managed fishery or if it is farmed, then a responsible farm. Look for Fairtrade and Rainforest Alliance endorsements and CSPO for products containing sustainably sourced palm oil.
- 6. Eat fewer foods high in fat, salt and sugar** - heavily processed food tends to be more resource-intensive to produce. Keep foods such as cakes, sweets and chocolate as well as cured meat, fries and crisps to an occasional treat. Choose water, avoid sugary drinks and remember that juices only count as one of your 5-a-day however much you drink.

THE FUTURE IS IN OUR HANDS

As the well-known proverb goes "We do not inherit the Earth from our ancestors; we borrow it from our children." We can meet our needs today without compromising the ability of future generations to meet theirs. And this can be done very simply. Whether we are meat-eaters or vegetarians, by thinking about the way in which we eat we can create the solutions that will safeguard the future of this, our one and only planet. And there's even better news: what's healthy for the planet is generally healthy for people too.

USEFUL LINKS

lovefoodhatewaste.com/

A site with information on how to cut down food waste.

eatseasonably.co.uk

Timely advice on what to grow and what to eat

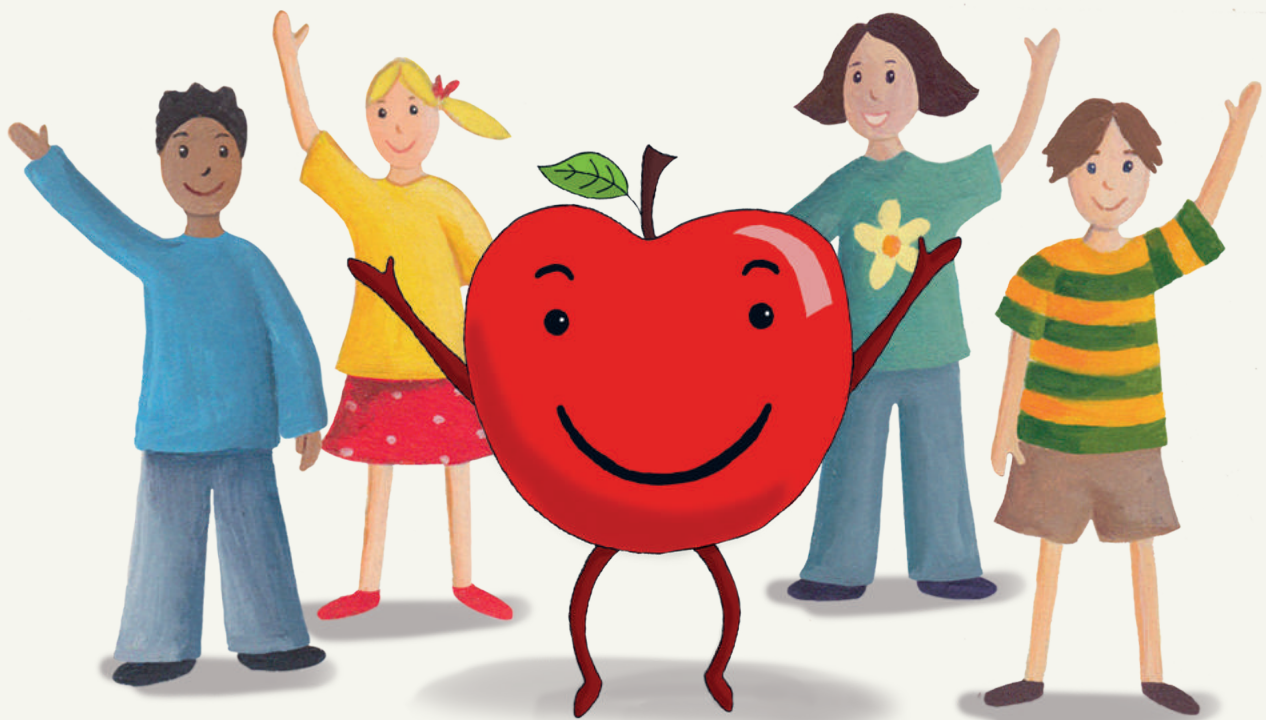
wwf.org.uk/livewell/

This page contains links to LiveWell menus and shopping lists.

[countrysideclassroom.org.uk /](http://countrysideclassroom.org.uk/)

A site which supports teachers to use the 'outdoor classroom' as a resource across the curriculum.

Plenty of advice for growing food in schools.



Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

wwf.org.uk