





Contents

Intr	Page 3	
Act	ivities	
1.	Attitudes to food waste	Pages 4-6
2.	Get them thinking - quiz	Pages 7-9
3.	Monitoring waste at home	Page 10
4.	Cutting out food waste at home - what's most important?	Page 11
5.	Use by or best before?	Page 12
6.	Making compost	Page 13
7.	Food waste in the supply chain Retailers	Page 14
	Food growers/processors	Page 15
8.	Some thoughts on food waste	Pages 16-18
9.	Debating	Page 19
10.	Is it appropriate to use surplus food to feed the hungry?	Page 20
11.	Useful links	Page 21
12.	Create a Campaign	Page 22
13.	Farming and Countryside Education (FACE)	Page 23

The activities in this booklet can form part of a whole programme or, at the teacher's discretion, specific activities can be selected for use in class.



This booklet has been produced to help young people:

- Learn about food waste
- Judge the bias and reliability of different sources of information
- Draw their own conclusions having analysed and reflected on their own current views
- Make informed decisions

When handling controversial issues teachers will need to employ approaches that meet the need for balance and objectivity and to ensure avoiding bias. The Oxfam Global Citizenship Guide on Teaching Controversial Issues (2006) <u>https://goo.gl/</u><u>HGNhvs</u> contains helpful suggestions on appropriate ways of introducing controversial issues and of managing the responses that result.

These include:

- Setting ground rules e.g. showing respect for the views of others, using appropriate language and giving reasons for having a particular view
- Role of the teacher e.g. objective, devil's advocate or declared interest
- Teaching approaches e.g. group discussion, role-play and community of enquiry



1. Attitudes to food waste

Aim

To use photographs to explore pupils' viewpoints

Activity

Have available a selection of photographs connected to the food waste debate. (Some examples are provided on the following pages).

Divide the class into groups.

Place a selection of photographs on large sheets of paper (one sheet for each group).

Provide the groups with two colours of sticky notes, one for positive and one for negative comments.

Ask the pupils to write comments about the photos on the sticky notes deciding first if their comment is a positive or a negative one in relation to food waste. (You may wish to provide some examples to get started).

Pupils add comments to the appropriate picture.

Display the work and discuss the reasons why the different pictures created different responses.



Attitudes to food waste







Attitudes to food waste







Get them thinking!

Use this quiz as another starter activity

- **1.** About how much of the world's food is thrown away/spoiled? **a)** 20% **b)** 30% **c)** 50%
- 2. How much food waste does the UK produce each year?
 a) 30 million tonnes
 b) 15 million tonnes
 c) 70 million tonnes
- **3.** What percentage of bagged salad is thrown away in the UK? **a)** 68% **b)** 75% **c)** 20%
- **4.** What percentage of bakery products are thrown away in the UK? a) 70% b) 50% c) 25%
- 5. What proportion of bananas are thrown away in the UK?a) 20% b) 30% c) 50%
- 6. What does food waste cost each UK family per year?a) £500 b) £25 c) £700
- 7. What proportion of our environmental footprint is due to food?a) one thirdb) halfc) a fifth

Continued.....



8. In Europe and North America people throw away 95-115kg of food each per year. How much food is wasted by people in Sub Saharan Africa and Asia?

a) 20 – 30 kg **b)** 6 – 11kg **c)** 40 – 50kg

9. How many companies control 70 per cent of the global food market?

a) a few hundred b) a few thousand c) a few tens of thousands

10. How much of their income do people in developing countries spend on food? (In the UK it's about 10 per cent)

a) 20 per cent b) 40 per cent c) 70 per cent



Get them thinking - answers

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2. Monitoring waste at home

"Food is a valuable resource and yet UK households throw away 7.0 million tonnes every year, around 19% by weight of that purchased. More than 4.2 million tonnes of this could have been eaten, including around 13 billion '5 a day' portions." (WRAP <u>http://www.wrap.org.uk/content/solutions-prevent-household-food-waste</u>)

Aim

To appreciate how much food is wasted in the home environment.

Activity

How much food do you waste at home? (Note to teachers: ideally, a food waste diary needs to be kept for at least a week before the rest of this activity is carried out.)

Ask students to keep a food waste diary for their household. Remember to include

Food that is left on the plate after a meal

Leftovers from a takeaway meal

- Food that is left in the fridge and then thrown away for whatever reason (try to establish the reason)
- Fresh produce that hasn't been eaten (those mouldy carrots in the veg rack or the bananas that have gone black)

Any other foods wasted

At the end of the week, in groups, students compare the results of their diaries and identify common factors.

It might be possible to carry out a similar exercise in school. If the school kitchen staff agree, perhaps a food waste survey can be carried out there during a week. A selection of pupils or classes might also be involved in monitoring food waste at break times or on any other occasion when food is consumed in school.



3. Cutting out food waste at home – what's most important?

Aim

To find out about and assess ways to reduce food waste in the home.

Activity

1. Ask students to make a list of all the ways they can think of to avoid food waste at home.

Now they should use a search engine to see if they can add to their list

Or they can try these sites:

British Heart Foundation

https://goo.gl/Qz75d0

ITV news

https://goo.gl/Tw5Tdc

Try playing the food waste game

https://goo.gl/nwkqjg

2. Divide the class into groups. Provide each group with some blank cards or slips of paper and an outline diamond shape on a piece of flipchart paper or other large sheet.

Provide these instructions: In your group, select 9 tips for avoiding food waste. Write each on a separate card/slip of paper. Exchange your 9 cards with another group. Look at each of the tips you have been handed. Discuss them in your groups and using the diamond shape rank them in order of importance with the most important tip at the top, two on the next row, then three, then two and the least important tip at the bottom.

When all groups have ranked the tips, discuss as a class to see whether there is agreement about the importance of reducing food waste and the most effective ways to do this at home.



4. Use by or best before?

Aim

To learn the difference between "Use by" and "Best before" terms on packaging.

Activity

Do we all understand the difference between these terms?

Provide a variety of food packaging (or where appropriate the foods themselves if tinned or dried, for example). Alternatively, provide photos of packaging.

Ask the pupils to list the food items and to capture the information about use by or sell by dates.

What can they conclude about the differences between use by or sell by?

Refer to the following information sources to check their theories.

Best before and use by dates:

https://goo.gl/UrUaUk

https://goo.gl/Qt5XXH

http://www.nhs.uk/livewell/goodfood/pages/food-labelling-terms.aspx

Ask pupils to suggest ways of reducing waste of the foods they have been given as examples (e.g. freezing, batch cooking, not buying too much at once etc.)







5. Making compost

Aim

To understand which foods can be composted and to learn how to create compost

Activity

Some food waste can be made into compost which is an excellent and nutritious addition to the soil in your garden at home or in school.

But do pupils know which types of waste can be composted? Use these resources to provide a practical activity for a wide variety of age groups.

http://www.countrysideclassroom.org.uk/resources/696





6. Food waste in the supply chain

Aim

To consider different areas of the supply chain to understand where food waste occurs and how it might be combatted.

Activity

Divide the class into two groups. Each group will investigate waste in a different part of the supply chain:

a) Retailers b) Food growers/processors

a: Retailers

What's happening in shops and restaurants? What are supermarkets and food outlets doing to reduce food waste? Use the following links to answer these questions.

How much food is wasted in the retail sector?

https://goo.gl/w58fQP

Look at the recommended ways for restaurants to cut waste. Which do you think would be best?

https://goo.gl/QdFCUN

What happens at Riverford Organics?

https://goo.gl/cTVWUL

Why did supermarkets reject these vegetables?

https://goo.gl/LjwnKg

What is the Real Junk Food Project?

https://goo.gl/nYdlij

Did offering perishable foods at lower prices work?

How are some supermarkets using their waste food in an innovative way?

https://goo.gl/nUoXIP



Food waste in the supply chain continued

b: Food growers/processors

Martin Bowman, UK Gleaning Coordinator for Feedback, said;

"After dedicating a lot of time and resources to growing a crop, farmers often cannot sell some of it, even though it is perfectly edible and delicious. This is often down to factors outside their control, like retailer policy, consumer preferences, market unpredictability, and the weather. At a time of price squeezes on farmers, food poverty, and worries about food security, this is no small problem. For the sake of farmers, consumers and the environment, reducing this waste is in everyone's interests

April 15 NFU Online

How are these processors trying to improve the situation?

https://goo.gl/99kF53

Find the diagram on page 4 of the following document. Focus on columns 2 and 3 and be prepared to explain the different ways waste is dealt with.

https://goo.gl/DFvLUr

What are the reasons identified by the NFU resulting in food waste on farms?

https://goo.gl/AKLCpl

Why have these parsnips gone to waste?

https://goo.gl/LjwnKg

What are Tesco doing to prevent waste on farms?

https://goo.gl/X7r8Pi

What is Gleaning? Is it a practical solution?

https://goo.gl/9SDSps



8. Some thoughts on food waste

Aim: To provide views from individuals for pupils to consider as part of their research.

Lee Abbey is the National Farmers Union Horticulture Adviser

Food waste data is limited and it is not currently possible to put an accurate figure on how much fruit and veg is wasted in the supply chain. There are also differences of opinion on what 'waste' actually is. Some commentators say that anything that is diverted away from its original market is 'waste.' But this does not take into consideration food that is sold for animal feed or used in anaerobic digesters to create energy.

There is also a misconception that if fruit and veg is 'wasted' at the farm level, that it is the responsibility of the grower, and if it is wasted within the supply chain, it is the responsibility of the packer/ retailer. In fact, a large proportion of food that does not make it into the human food chain is as a result of decisions made further up the supply chain, not due to poor farming practices. For example, retail food specifications have tightened significantly in recent years meaning fruit and veg that was found on supermarket shelves ten years ago may now be rejected on the basis of size, colour or cosmetic appearance.

The horticulture and potatoes sector is probably the most innovative in the whole of agriculture and, therefore, growers are constantly adopting new technology and techniques to make sure they continue to meet retail/ consumer requirements, whilst at the same time minimising waste. But of course, no matter how hard you try, you will still get years like 2012, which saw the wettest summer in a hundred years affecting both crop yields and quality significantly. In that year, retailers lowered their specifications in order to allow more of the crop to be sold and, interestingly, most consumers didn't even notice the difference.



8. Some thoughts on food waste

A lot has been said about the virtues of selling 'wonky' veg to consumers, in order to reduce waste. It is a reasonable idea but one which is not fully thought out. In fact there are a number of unintended consequences that could potentially damage the supply chain. For example, one retailer introduced a wonky veg range in store but found that it didn't have enough misshapen veg to fill the bags – and ended up putting class 1 veg in there to make up the shortfall. This range has since been pulled from the shelves because it simply wasn't economical to continue. Another consequence of selling wonky veg is that it may reduce sales of class 1 veg, meaning more of that goes to waste. And if sales of class 1 veg falls, it will impact on UK farming businesses and may result in more imports from abroad.

What is much more important than having a gimmicky 'wonky veg' range is for retailers to work more collaboratively with their suppliers. Specifications need to be flexible so that as much fruit and veg can be sold as possible. Consumers should understand that growing fruit and veg is not an exact science and sometimes the cosmetic appearance can be altered due to unseasonable weather. If one week the carrots are long and straight and the next they are a bit shorter and slightly bent, does anybody really care??



Some thoughts on food waste

Tristram Stuart is the founder of an organisation called Feedback.

The Global Food Waste Scandal is a 15 minute film of a TED Talk in which he summarises his thoughts and ideas about global food waste:

http://feedbackglobal.org/food-waste-scandal/

(Teachers might wish to watch the film in advance, to divide it into sections for their pupils to discuss in more detail.)





9. Debating

Debate offers pupils the opportunity to research using materials representing a wide range of viewpoints, to question others, to listen to differing views and hence to make their own informed decisions.

In school debate can play an active role in many subject areas including geography, English, PSHE and science.

Why not invite representatives of local organisations into school to take part in a debate? Organisers of local food banks, farmers, supermarket managers—see who will take up the challenge!

Benefits

Helping young people to examine food issues by research, by talking about and listening to various viewpoints is an invaluable way to assist them in the formulation of their own views. The activities help students to examine the positive and negative effects of issues under discussion and to uncover ways forward.

This approach is also contributing towards the acquisition of many skills:

Information processing – locating and collecting relevant data

Reasoning – giving reasons for opinions and actions, and making decisions informed by reasons or evidence

Enquiry - asking relevant questions

Evaluation – judging the evaluation of what they hear and read

Activity

Now the pupils have had the opportunity to research many aspects of food waste, arrange a class debate.

Divide the class into teams with pairs of teams preparing to present or oppose a particular statement

e.g. We believe supermarkets are wholly responsible for all our food waste. We believe education about healthy eating and shopping habits is the only way to tackle the food waste crisis.



Is it appropriate to use surplus food to feed the hungry?

Aim: A challenging task encouraging discussion amongst older or more able pupils.

Activity

Ask pupils to look at the categories on the left and to suggest further answers in the remaining columns. Once they have completed the task, consider the responses on pages 10-11 of this document by the Food Research Collaboration goo.gl/2fY3yO

Stakeholders	Benefits	Drawbacks
People who are hun- gry/struggling to make ends meet		Choice limited by what is "surplus" in the food chain
Food industry (grocery stores, food manufac- turers, farmers)	Reduces the amount of food waste to be reported annually	
Volunteers working in charities	Can broaden activities to include cooking activities	
Charitable organisa- tions running food pro- grammes		Specific storage facilities needed to store fresh perishable surplus food
Government	Government can make a claim to have supported the reduction of food waste and food poverty	
Society	Caring for the most vulnerable	



Useful links

Opportunities for further investigation:

The role of technology BBC News, 2016

https://goo.gl/7bBAbV

Farming and food waste – Food & Agriculture Organisation of the United Nations

https://goo.gl/AePcuY

In the home – Love food hate waste, a campaign from WRAP

https://goo.gl/GUzmvz

France bans supermarkets from wasting food

https://www.theguardian.com/world/2016/feb/04/french-law-forbids-food-wasteby-supermarkets

What do supermarkets do with food that has passed expiry date?

https://www.quora.com/What-do-supermarkets-do-with-food-items-that-havepassed-their-expiry-date

Combatting food waste throughout the food chain

https://goo.gl/MkelvP

Stop the Rot Some useful statistics presented in an engaging way http://stoptherot.org.uk/assets/stop-the-rot-report_compressed.pdf

Is it appropriate to use surplus food to feed people in hunger? Background reading for teachers: <u>https://goo.gl/2fY3yO</u>



Create a Campaign

At whatever stage of learning you feel your pupils have a good grasp of the issues around food waste appropriate to their age, ask them to work in groups to create their own campaign to tackle food waste.

Who is their audience? This could be other pupils/classes/year groups; families; the whole school to include the kitchens, the staff ; their community outside school; other ideas

What techniques will they use? Posters/films/leaflets/social media/ presentations in assembly, to the local council; invitations to outside speakers

Will they focus on one area of waste such as in the home or school or will they look at global food waste?

How will they monitor progress and impact? Pre- and post- surveys; interviews; questionnaires.

Provide an opportunity for pupils to report on their campaign and their findings.



Farming and Countryside Education

Farming and Countryside Education (FACE) works with school communities to help children and young adults understand the connection between farming and their daily lives.

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