# Education Pack Fighting against food waste



Primary 1 - 3



Primary 4 - 6



Primary 6 - 7



Secondary



Whole school



### Introduction

Welcome to the Love Food Hate Waste education pack for the Scottish curriculum. Love Food Hate Waste is here to help us all make the most of the food we love. By taking simple steps we can all reduce the food that we end up throwing away, saving ourselves money and reducing our impact on the planet. In Scotland, Love Food Hate Waste is run by Zero Waste Scotland as part of our drive to value resources and inspire change.

Through a variety of engaging and easy to use inter-disciplinary lessons, your learners are given a voice on a significant problem facing our world today. They are able to contribute directly in a positive and tangible way to the Global Goals for sustainable development from the United Nations and the Scottish Government pledge to reduce the food we throw away by 33%.

We are here to support your teaching and enhance learning. Along with curriculum links and engaging activities this pack includes:

#### Primary lessons

The first lesson of each age group will inform and inspire your learners, the second will have them loving and valuing food, while the third will give them all the practical know-how to hate waste and save food from the bin.

#### • Secondary lessons

Subject specific and stand-alone, these lessons are the perfect opportunity to embed Learning for Sustainability across the curriculum and tackle a pressing global issue in a different context.

#### • Whole school lessons

Putting your learning into practice, the whole school lessons facilitate your engagement with food in the school setting and support you in sharing what you've learned with the wider community.



Thank you for joining us in the fight against food waste and we hope you enjoy taking your learners along on this journey to save food from the bin.

The Love Food Hate Waste team, Zero Waste Scotland.

lfhw@zerowastescotland.org.uk







Primary 1 - Primary 3

### **Curriculum links**

Early years lessons	Lesson 1  Be a food super saving hero	Lesson 2 Food transformers	Lesson 3 Practical powers
Expressive Arts			
Health and Wellbeing	HWB 0-35a, HWB 1-35a	HWB 0-30a, HWB 0-35a	HWB 0-30a, HWB 0-32a
Literacy and English	LIT 0-10a, LIT 1-04a		LIT 0-10a, LIT 1-04a
Numeracy and Mathematics	MNU 0-01a, MNU 0-20b		MNU 0-01a, MNU 0-20b
Sciences	SCN 1-02a, SCN 1-04a	SCN 1-02a	SCN 1-02a, SCN 1-04a
Social Studies	SOC 0-07a, SOC 1-08a	SOC 0-08a, SOC 1-08a	SOC 0-08a, SOC 1-08a
Technology		TCH 0-02a	TCH 0-02a
Religious and Moral Education			





#### In a nutshell

This lesson introduces the idea that a lot of effort goes into getting food from farm to fork and when we waste food we also waste the effort that went into making it. Over the next three lessons learners will be inspired to save food from the bin, earning different powers when completing each activity, ultimately becoming 'food saving heroes'.

Powers that can be gained include:

- I can save food
- I can protect the planet
- I can store food
- I have portion power





#### Core learning

We are learning about why it is important to save food from the bin because we understand the effort that goes into making it and the harm it can cause when it is put in the rubbish bin.



#### Preparation

- Print the 'Life of a strawberry' worksheet 1 per learner.
- Print the 'Build a roll' worksheet 1 per learner.
- Print the 'Food saving hero' worksheet 1 per learner.
- Display 'Farm to fork' PowerPoint.



#### Starter

Show learners the 'Farm to fork' PowerPoint on the impacts of throwing food away.

The key points to emphasise throughout this lesson are:

- Where food goes when you throw it in the rubbish bin and in the recycling bin.
- Food takes effort to get from the farm to your fork.
- When you waste food you are wasting all the effort that went into making that food too.
- When food goes in the rubbish bin it releases nasty gases which are bad for the planet, making it warmer and harder for us to live on.
- There are ways of saving food from the bin and making sure that all the effort isn't wasted.



#### Main

To bring the lesson to life you may wish to show learners the following short film

https://www.youtube.com/watch?v=uTaFYF1nA4c

Give learners a 'Life of a strawberry' worksheet and ask them to cut out the images and put the stages of the life of a strawberry into the correct order. You may wish to print out one or two sheets and laminate the squares.

- 1. Grown on a farm
- 2. Picked from the field
- 3. Put in boxes
- 4. Taken to the shop
- 5. Bought from the shop
- 6. Kept in the fridge at home to keep fresh

Once learners have completed this activity show them the 4th slide in the PowerPoint and ask them why they think that all the symbols are in the bin with the strawberry? It is because everything that went into making the strawberry is also wasted when you put it in the bin.

Now ask learners to fill in the 'Build a roll' worksheet.

The roll is structured:

- 1. Bread roll
- 2. Sauce
- 3. Lettuce, tomato and cucumber
- 4. Cheese
- 5. Ham
- 6. Bread roll

Ask learners to name each part of the sandwich and label the 'process' for each item - this can be described as the effort that has gone into making,

growing or cooking each part. They should take words from the word bank to fill in the missing blanks.

Show learners the 5th PowerPoint slide. Ask them why these words are in the bin with the roll? They should now be able to tell you that they are in there because when you waste food you are also wasting all the effort that goes into making that food.

Show learners the 6th PowerPoint slide.

Ask them what they think the nasty looking gases coming from the food are doing? Explain that these gases are choking our planet and making it too hot.

Tell learners there is a way to stop this but it needs them to become...





#### 📤 Dessert

Ask learners to draw themselves as a 'Food saving hero' on the sheet and explain that they will soon be learning how to save food and protect our planet. You may want to insert a photo of their face onto the worksheet.

It is worth noting that the stars at the side of the worksheet will be coloured in as they progress through the lessons. Tell your learners to wait to colour in

the stars in a later lesson!



#### Extra helping

Learners could create a digital version of their superhero using a free avatar creator on the internet at home.

#### Curriculum for Excellence Experiences and Outcomes Health and Wellbeing

- HWB 0-35a: I explore and discover where foods come from as I choose, prepare and taste different foods.
- HWB 1-35a: When preparing and cooking a variety of foods, I am becoming aware of the journeys which foods make from source to consumer, their seasonality, their local availability and their sustainability.

#### Numeracy and Mathematics

 MNU 0-01a: I am developing a sense of size and amount by observing, exploring, using and communicating with others about things in the world around me.

#### Sciences

- SCN 1-02a: I can explore examples of food chains and show an appreciation of how animals and plants depend on each other for food.
- SCN 1-04a: I am aware of different types of energy around me and can show their importance to everyday life and my survival.

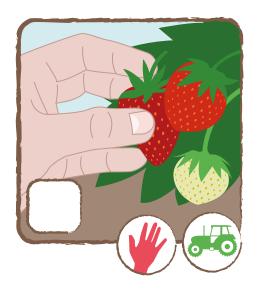
#### Social Studies

- SOC 0-07a: I explore and discover the interesting features of my local environment to develop an awareness of the world around me.
- SOC 0-08a: I explore and appreciate the wonder of nature within different environments and have played a part in caring for the environment.
- SOC 1-08a: I can consider ways of looking after my school or community and can encourage others to care for their environment.

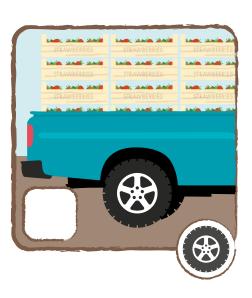


## Life of a strawberry worksheet

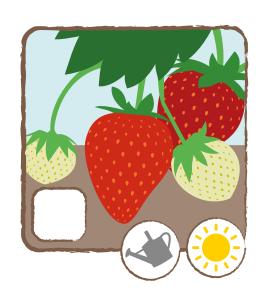


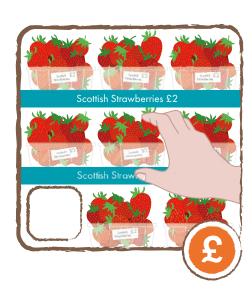


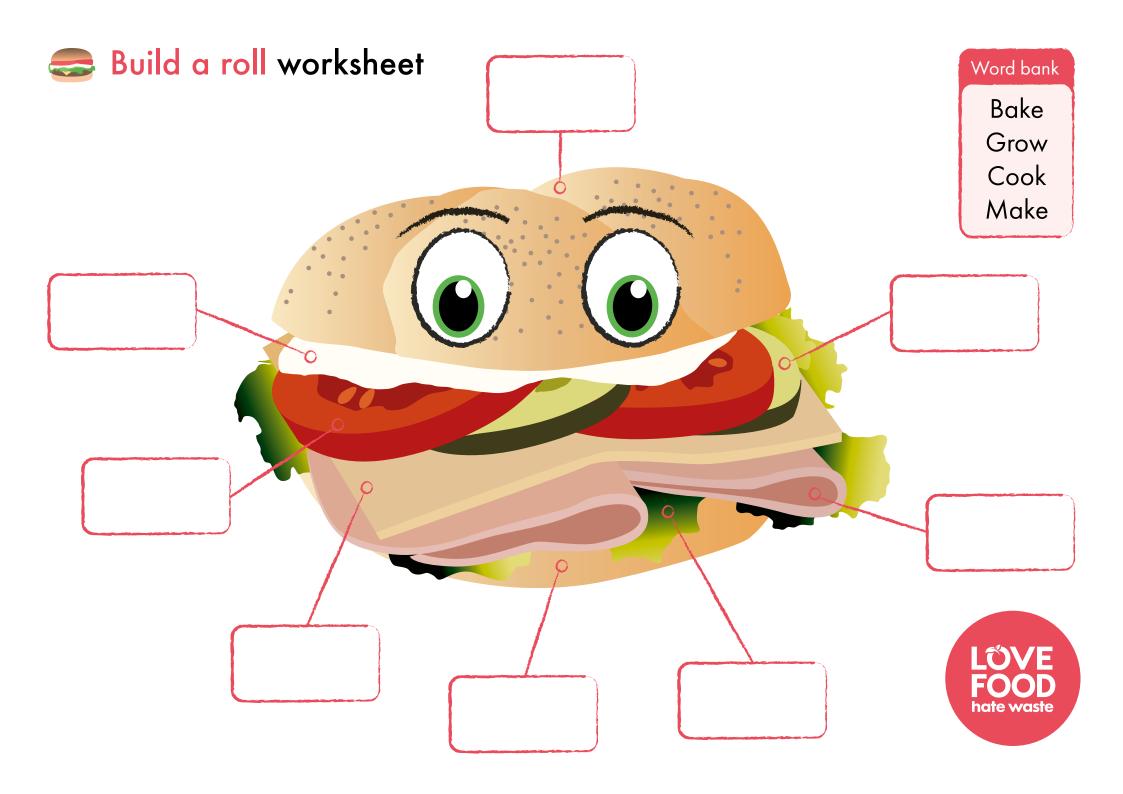






















### 2. Food transformers



#### In a nutshell

This lesson explores how food can be used in different ways through a practical taste test. Learners are encouraged to challenge their preconceptions about different types of fruit and 'ugly' produce. For instance, they might not eat a brown banana but what about a banana smoothie?



#### Core learning

We are learning that food can be transformed into different things and eaten in different ways. We understand that by doing this we are saving food from the bin and protecting our planet.



#### Preparation

- '<u>Farm to fork</u>' PowerPoint used in lesson 1 you will need slides 3 and 7.
- You will need the 'Food saving hero' worksheets completed in lesson 1.
   On the right of this worksheet there are four superpower stars for learners to colour in when they have developed them.
- Print 'Taste test' worksheet 1 per 2-3 learners .
- Odd looking fruit and veg brown bananas, bruised, scarred or misshapen fruit or veg.

For the 'Taste test' activity you will need:

Please note that you will need to prepare the 'taste test' before the lesson takes place.

Safety Note: Check whether anyone is allergic to any fruit or vegetable. If any learners are, take note and make sure they are kept away from their

allergen or don't serve it at all.

- Ice cube trays
- Blender & cups for drinking (if making smoothies)
- Fruit of choice, fruit cordial & jelly
- Cut your fruit of choice into small pieces.
- Put some of these pieces to the side and some in the ice cube tray. For half of the fruit in the ice cube trays, cover with a jelly mixture of your choice and leave to set. For the other half of the fruit in the ice cube trays, cover with water and a fruit cordial of your choice and freeze to make fruit ice lollies. Make a smoothie mixture of your choice using any remaining fruit. Recipe suggestions can be found on the Love Food Hate Waste website.

The idea with this activity is that the fruit is all the same but in different forms and mixed with different things.







### 2. Food transformers



#### Starter

Tell learners that today they will gain superpowers to help them save food from the bin. When they have gained these powers they can colour in superpower stars on the right of the 'Food saving hero' sheet.

Each square represents a different food saving power:

- I can save food
- I can protect the planet
- I can store food
- I have portion power



Ask learners to write down or draw a picture of their favourite fruit.

Ask learners what they like about their favourite fruit? Is it the colour, texture, shape, smell or taste?



#### Main

Divide learners into groups of 2 or 3 and give them a 'Taste test' sheet. Encourage them to try and rate the following:

- Fruit cut into pieces
- Fruit jelly squares
- Frozen fruit lolly squares
- Smoothie

The idea is that the same fruit will feature in all of the squares/smoothie allowing learners to compare and contrast the fruit prepared in different ways. After learners have tasted everything ask them:

- What did they like?
- Was there any fruit that they didn't like the taste of but they liked as a jelly, lolly or smoothie?
- Ask learners if there are any fruits that they thought that they didn't like but they now do?

Explain to learners that they can use their superpowers to turn food that they don't like into food that they do like! Ask learners to colour in two of the spaces on the 'Food saving hero' sheet 'I can save food' and 'I can protect the planet'.

Show learners the 3rd slide of the 'Farm to fork' PowerPoint and discuss what symbols were needed during the 'Taste test'.

- Sun and water symbols the fruit was grown.
- **Hand** the fruit had to be picked.
- Wheel all the ingredients needed to be transported to us.
- **Money** the ingredients needed to be bought by the teacher.
- Snowflake the jellies were put in the fridge and the lollies were frozen.
- Make the jellies, lollies and smoothies were made.

### 2. Food transformers



#### 📤 Dessert

Once learners have realised that lots of effort has gone into what they have just eaten explain that because fruit and vegetables are grown by nature sometimes they don't end up looking as perfect as we are used to seeing in the supermarket.

Show learners images of 'ugly' or odd looking fruit and vegetables on the last slide (slide 7) in the 'Farm to fork' PowerPoint.

If appropriate, show learners any odd looking fruit and vegetables that you've managed to bring in and ask them:

- Would they normally eat 'ugly' fruit and vegetables? If not, why not?
- What would they normally do with a brown banana or bruised apple?



Tell them that these less perfect fruit and vegetables taste just the same as the kind that they see in the supermarket. Explain to learners that like they have just learned in the taste test, ugly or odd food can be transformed into other things to save them from the food waste caddy. A brown banana or a bruised apple would taste great in a smoothie. You may wish to share other examples with them including fruit crumble, fruit pancakes, trifles and vegetable mash.

Ask learners what they normally do if they don't like a fruit that they are given? Explain to the class that wasting food wastes money and is really bad for our planet. Tell learners that we can all become food saving heroes if we try!



#### Extra helping

Create a word cloud with learners favourite fruits using:



www.tagxedo.com

Please note you should type in the fruits the number of times that they were mentioned. The more times that you type in a fruit the bigger that word will appear on the word cloud.

#### Curriculum for Excellence Experiences and Outcomes Health and Wellbeing

- HWB 0-30a: Together we enjoy handling, tasting, talking and learning about different foods, discovering ways in which eating and drinking may help us to grow and keep healthy.
- HWB 0-35a: I explore and discover where foods come from as I choose, prepare and taste different foods.

#### Sciences

• SCN 1-02a: I can explore examples of food chains and show an appreciation of how animals and plants depend on each other for food.

#### Social Studies

- SOC 0-08a: I explore and appreciate the wonder of nature within different environments and have played a part in caring for the environment.
- SOC 1-08a: I can consider ways of looking after my school or community and can encourage others to care for their environment.

#### **Technologies**

• TCH 0-02a: Within and beyond my place of learning, I can reduce, re-use and recycle resources I use, to help care for the environment.

### Taste test

Food 'Form'	Tick when you taste	don't like	like
Fruit		00	000
Fruit jelly squares		00	000
Frozen fruit lolly squares		00	000
Smoothie		0	000



### 3. Practical powers



#### In a nutshell

This lesson introduces the idea of saving food from the bin through correct storage and portioning in an interactive and engaging way that builds on the learning from the previous lessons.



#### Core learning

We are learning to save food from the bin by storing it in the right place and not taking too much because we understand that putting food in the wrong place makes it go off quicker and taking too much can lead to waste.



#### Preparation

- Print the 'Storage snap' worksheet 1 per learner.
- Display the 'Storage song' on a whiteboard.
- Have 'Oh My Darling Clementine' song ready to play for singing the 'Storage song':

www.youtube.com/watch?v=0VYt6jTI8Yo



• Display the 'Portion poem' on a whiteboard.



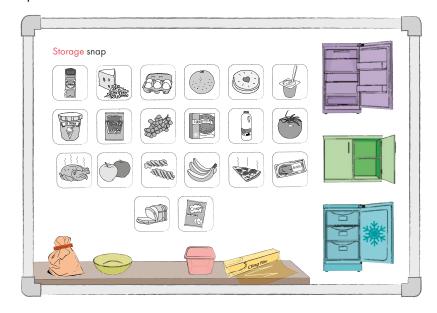
#### Starter

Explain to learners that they are going to explore two of the reasons that lead to food getting chucked into the bin - not storing things properly and taking too much.

 Ask learners if they know what happens when we don't store food properly?

Explain that food goes off and mouldy meaning it isn't safe for us to eat. We can make food last longer and save it from the bin if we store it correctly. Explain that some food needs to go into sealed boxes or tins, some in the fridge and some in the freezer.

- Ask learners if they sometimes leave food on their plates? If so why do they do this?
- Ask them if they know what happens to the food that they leave on their plates?



### 3. Practical powers



#### Main

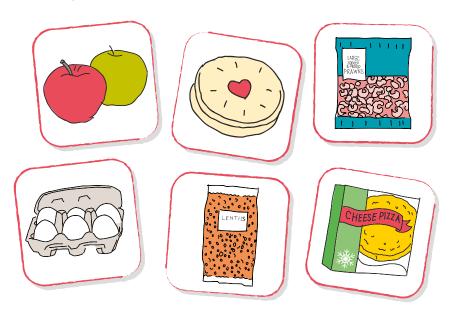
#### Storage

Show this short time lapse video to the class:

www.youtube.com/watch?v=RHwPCjnX-Ys



Give learners a 'Storage snap' worksheet and ask them to pair up the foods that are listed to the correct storage place. Some food can be stored in more than one place!



Once the class has completed the worksheet tell them that they are going to learn a fun song to help them remember how to store different foods.

#### 'Oh My Yummy, Food of Mine'.

You might want to sing the song through once or twice then go through each line, discussing and explaining what it means.

Each storage space is coloured a different colour. Ask learners to colour the images of food to match where they should be stored. For instance, if the cupboard is green and pasta is stored in the cupboard, pasta should be coloured green.

Tell learners that some food will need two colours because:

- It can be stored in two different places
- It needs to be wrapped up or sealed before it can be stored

Milk - Fridge or freezer Biscuit - Sealed box

Spice - Cupboard Tomato - Fridge

Cheese - Fridge or freezer

Eggs - Fridge Oranges - Fruit bowl

Yoghurt - Fridge

Cooked Pizza - Fridge & cling film Bananas - Fruit bowl Ice Cream - Freezer

Crisps - Cupboard Frozen Pizza - Freezer

Chicken - Fridge & sealed container

Bread - Bag & clip Beans - Cupboard Bacon - Fridge

Pasta - Cupboard Apples - Fridge

Grapes - Fridge or freezer

Learners should note that cooked food needs to be cooled and sealed then put in the fridge to keep fresh. Ask learner if they were surprised that milk and cheese can go in the freezer? Cooked food can also be saved in the freezer if we want to eat it another day.

It is worth noting that bananas can be stored in the fruit bowl but they make other fruit go off faster so sometimes keeping them separate can be best.



### Points to note in Oh my yummy, food of mine!

In a cupboard or a freezer,	Food can be stored in different places.
Saving food to taste just fine,	Storing food properly keeps it tastier for longer.
Need to keep you 'fore I eat you,	Usually we store food before we eat it.
Make you last a longer time.	Storing food properly makes it last longer.
Oh it's yummy in my tummy,	Food is delicious and good for us.
Keep it yummy, food of mine!	Proper storage keeps food tasty and fresh.
Don't be lost and gone forever Keep it yummy, food of mine!	Don't waste food if you can help it.
Keeping ice-cream in the freezer,	lce-creams, ice lollies etc are all kept in the freezer.
Ready meals and frozen veggies,	Frozen veg, frozen fruit (like berries) and frozen meals can all be kept in freezers.
Make leftovers last forever,	Leftovers can be frozen to be used later. NOTE! They don't last forever but much longer.
Extra meat, bread, even veggies,	Meat can be frozen before its use-by date so if too much is bought, some can be frozen to use later. Extra bread that isn't going to be eaten can also be frozen. Even eggs can be frozen.

Chorus	
In the fridge, put all the dairy,	Milk, cheese, yoghurt, eggs and cream should all be kept in the fridge at 4°C.
Fruits and veg stay crisp and fine,	Salads and veg should be kept in the salad drawers to stay crisp.
In the bottom, meats and fishes,	Meat and fish should be kept on the bottom shelf and cooked meat should be kept separately from uncooked meat.
Keep in packets 'til dinner time.	Most food keeps longer in its original packaging.
Chorus	
Now we can stock the store cupboard,	Cupboards are at room temperature.
Bread, jars, tins go on shelves,	Bread lasts 6 times longer when kept out of the fridge.
Tatties and onions in the dark,	Potatoes and onions should be stored in the dark (in cloth bags works) in a cool area.
Bananas must stay by themselves.	Bananas can make other food go bad faster so keep them in a cool place by themselves and never in the fridge.

### 3. Practical powers

Once they have learned the song give them big round of applause and ask them to colour in the 'I can store food' space in their 'Food saving hero' worksheet.

#### **Portion sizes**

Explain to learners that another way that food gets wasted is because we often take more than we can eat.

#### Ask learners:

• Why do grown ups eat more than we do? Adults are bigger than children and need more food (calories) to keep them going.

Have a look at the eatwell plate before moving on to learn the 'Portion poem'.

www.foodstandards.gov.scot/nutrition-healthy-eating/eating-healthily/eatwell-guide

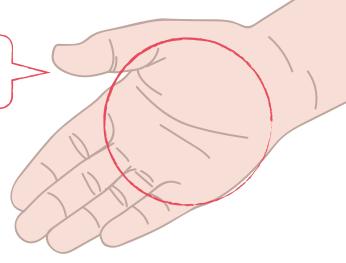
Teach learners the 'Portion poem' and the actions to go with it -



One portion's one fist for most of your tea



Meat, fish and nuts the size of your palm



### Points to note in portion poem

How much is too much to munch for your lunch?	Most people take too much food and either eat too much or don't eat it all and the food goes to waste which is bad for the environment.
Look at your hand and then you will see	A portion is different depending how big you are. Bigger people need to eat more food so need bigger portions.
One portion's one fist for most of your tea	A portion of fruit, vegetables, breakfast cereals and dairy products should all be about a fistful.
Two fists for your leaves but one for your peas	A portion of salad leaves is two fists but if the food is quite tightly packed (like peas) then only one fist.
But only one finger allowed for cheese	A portion of cheese is one finger.
Meat, fish and nuts the size of your palm	A portion of meat or nuts is enough to just cover a flat palm.
Eat all in proportion to help you stay calm	Reminder that meals should be approximately  1/3 meat/fish/protein, 1/3 vegetables and fruit and 1/3 carbohydrate.
Half a fist is a handful for noodles and rice	A portion of carbohydrates though is a handful, not a fist. A handful is about half a fist or half a cup.
Bread the size of your palm is perfectly nice	A portion of bread is the size of your flat hand – one slice is fine.

Spreads are delicious but only one thumb

A portion of butter, jam or peanut butter is one thumb.

Now eat it all up and don't waste a crumb

Remember to eat everything and not waste food!

Once learners have recited the 'Portion poem' ask them to colour in the final superhero power - 'I have portion power' on their 'Food saving hero' worksheet.

Make sure you display these worksheets either in the classroom or somewhere in the school to teach other learners and parents about saving food.

### 3. Practical powers



#### Dessert

Congratulate learners for becoming food saving heroes! Remind them that as food saving heroes they must:

- Save food and all the effort that goes into it from the bin.
- Save food by 'transforming' it make fruit into smoothies or jelly
- Store food properly to keep it fresher for longer.
- Watch your portions only take what you will eat.



#### Extra helping

Ask learners to practice the song and poem at home with their parents/carers.

Invite learners to perform the song and poem to the rest of the school and/or parents/carers.

Learners can deepen their learning about food, safety and healthier eating by playing **Cookin Castle** at home:

www.foodstandards.gov.scot/cookin-castle



### Curriculum for Excellence Experiences and Outcomes Health and Wellbeing

- HWB 0-30a: Together we enjoy handling, tasting, talking and learning about different foods, discovering ways in which eating and drinking may help us to grow and keep healthy.
- HWB 0-32a: I know that people need different kinds of food to keep them healthy.

#### Literacy and English

 LIT 0-10a: As I listen and take part in conversations and discussions, I discover new words and phrase which I use to help me express my ideas, thoughts and feelings.  LIT 1-04a: As I listen or watch, I can identify and discuss the purpose, key words and main ideas of the text, and use this information for a specific purpose.

#### Numeracy and Mathematics

- MNU 0-01 a: I am developing a sense of size and amount by observing, exploring, using and communicating with others about things in the world around me.
- MNU 0-20b: I can match objects, and sort using my own and others' criteria, sharing my ideas with others.

#### Sciences

- SCN 1-02a: I can explore examples of food chains and show an appreciation of how animals and plants depend on each other for food.
- SCN 1-04a: I am aware of different types of energy around me and can show their importance to everyday life and my survival.

#### Social Studies

- SOC 0-08a: I explore and appreciate the wonder of nature within different environments and have played a part in caring for the environment.
- SOC 1-08a: I can consider ways of looking after my school or community and can encourage others to care for their environment.

#### **Technologies**

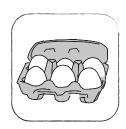
• TCH 0-02a: Within and beyond my place of learning, I can reduce, re-use and recycle resources I use, to help care for the environment.



### Storage snap

















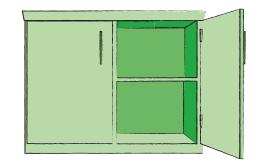




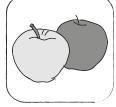






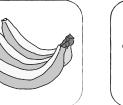


















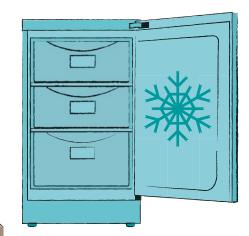












### Storage song Oh my yummy, food of mine!

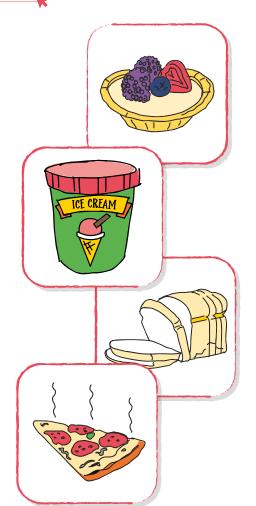
www.youtube.com/watch?v=0VYt6jTl8Yo

In a cupboard or a freezer,
Saving food to taste just fine,
Need to keep you 'fore I eat you,
Make you last a longer time.

Oh it's yummy in my tummy, Keep it yummy, food of mine! Don't be lost and gone forever Keep it yummy, food of mine!

Keeping ice-cream in the freezer,
Ready meals and frozen veg,
Make leftovers last forever,
Extra meat and extra bread.

Oh it's yummy in my tummy, Keep it yummy, food of mine! Don't be lost and gone forever Keep it yummy, food of mine!



In the fridge, put all the dairy,
Fruits and veg stay crisp and fine,
In the bottom, meats and fishes,
Keep in packs 'til dinner time.

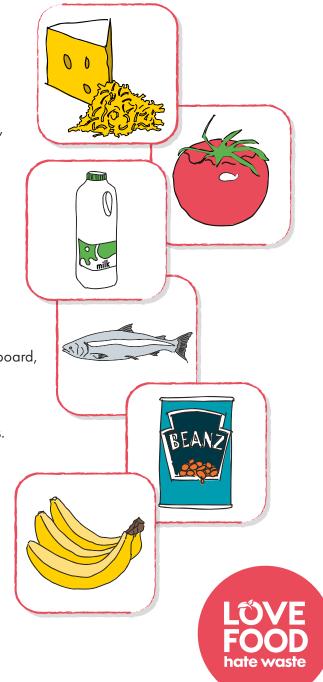
Oh it's yummy in my tummy, Keep it yummy, food of mine! Don't be lost and gone forever Keep it yummy, food of mine!

Now we can stock the store cupboard, Bread, jars, tins go on shelves, Tatties and onions in the dark, Bananas must stay by themselves.

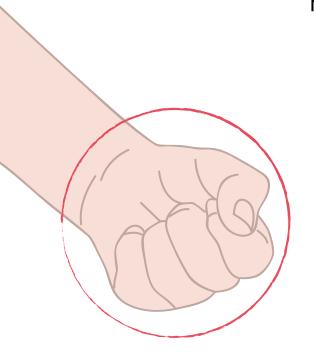
Oh it's yummy in my tummy, Keep it yummy, food of mine!

Don't be lost and gone forever! Keep it yummy, food of mine!

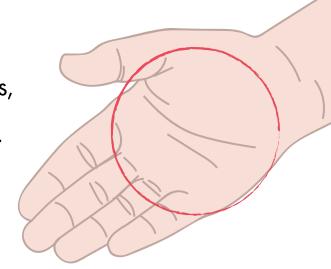
Oh it's yummy in my tummy, Keep it yummy, food of mine!



### Portion poem



How much is too much to munch for your lunch? Look at your hand and then you will see, One portion's one fist for most of your tea, Two fists for your leaves but one for your peas, But only one finger allowed for your cheese. Meat, fish and nuts the size of your palm, Eat all in proportion to help you stay calm, Half a fist is a handful for noodles and rice, Bread the size of your palm is perfectly nice, Spreads are delicious but only one thumb, Now eat it all up and don't waste a crumb!





### A'peeling links & resources

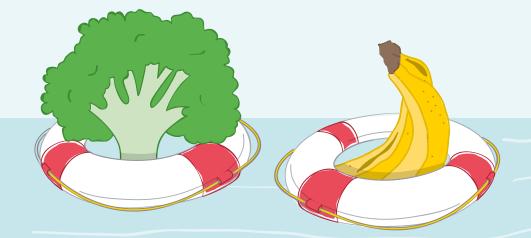
We hope that you have enjoyed working through this food waste fighting education pack from Love Food Hate Waste. If you're still hungry for more, why not explore some of the links below?

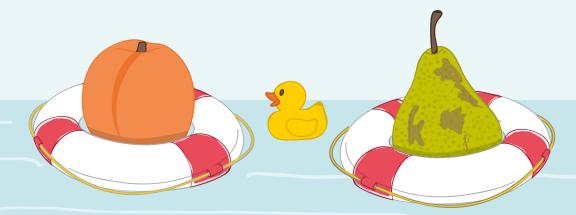
- The Global Goals for sustainable development from the United Nations - this pack contributes directly to goal 12.
   Responsible Consumption & Production but touches on others including goals 11 and 13.
- Wasteless
- Food for Life don't forget to share your success in the stories section.
- Quality Meat Scotland
- Royal Highland Education Trust
- Food and Drink Federation Scotland
- Eco Schools Scotland
- Chefs @ School

- Royal Environmental Health Institute of Scotland
- Food Standards Scotland
- Scottish Business in the Community Food for Thought
- Seafood in Schools
- Better Eating Better Learning
- Making Things Last A Circular Economy Strategy for Scotland, including the food waste target.
- The Crunch Food, Health & our Environment

With special thanks to Do Be Ltd for their work in developing this resource.







#### Love Food Hate Waste is delivered in Scotland by Zero Waste Scotland





scotland.lovefoodhatewaste.com facebook.com/lovefoodhatewastescotland lfhw@zerowastescotland.org.uk

01786 433960