



Harper Adams
University

Food Matters

A degree that matters



Food



FOOD
FOR THE
FUTURE

How to use this pack

What is included?

This pack includes:

- 2 x research projects that are taking or have taken place at Harper Adams University
- 5 activities to be completed

If food is something you love, this pack will give you an opportunity to see how many jobs are created in getting food from the fields to the supermarket shelves. It will also allow you to explore food labels in knowing where your food comes from.

Some sections of this pack will require you to have the internet. We would recommend parental supervision when searching the internet to support with the activities.

To complete the pack you will need some paper, a pen and coloured pens or pencils!

Curriculum Links:

The following pack has been put together with the national curriculum in mind. The following activities and elements of this pack are linked to core national subjects such as food technology, english and geography.

Elements of this pack link to the GCSE specifications, Food Provenance, science, nutrition and health. There are also links to the BTEC level 3 curriculum areas such as food labelling and packaging.

An introduction to Food Science and Food Technology

Food science looks into the physical, biological, and chemical makeup of food; and the ways in which food is processed.

Food technology is the use of the information generated by food science in looking into the selection, preservation, processing, packaging and distribution, as it effects the consumption of safe food.

This means every single item of food and drink that you buy in a supermarket comes to us through a food supply chain, from the farm to the food on your plate. It has been influenced by a food scientist along the way, as they are trying to make our food and drinks last as long as possible before going off or having an awful taste.

There are currently 3.2 million people working in the food and drink industry in more than 100,000 locations across the UK - not to mention the global opportunities.





Milk for baristas

Over 20,000 UK dairy farms have closed in the last 20 years. In 2015, over 700 new coffee shops opened, with a turnover of £7.9 billion. Agri-food Marketing with Business graduate Joe Towers responded by introducing a new type of milk for baristas that's given a new lease of life to his family's dairy farm.

Working with a London-based barista, Joe discovered a new market for the right type of milk to compliment speciality coffee. He introduced a new herd of Jersey cows to the family farm and the result was a milk with more protein and fat that worked perfectly for baristas.

With his family's help (including his brother a fellow Harper Adams graduate, Edward, who runs the farm) Joe created a new brand for the milk. The Towers now sell more than 20,000 litres a week to coffee shops across London via their partner, Allan Reeder, under the brand Brades Farm Barista Milk. The family is also working with researchers to see how the diets of their Jersey cows affect the taste and quality of their new milk.



Further thinking

What is a Barista?

Why did Joe introduce Jersey cows to the farm?

How many pints are there in 20,000 litres?

[Click here for the AUDIO FILE](#)



Mission ImPULSEible

Final year BSc (Hons) Food and Consumer Studies student Charlotte Reynolds wanted to combine her passion for cutting edge innovation with the 'International Year of Pulses' (IYP) to create a new product for her dissertation.

She considered many pulses for this project, and with over 18,000 species the possibilities were plentiful. However, through extensive research, it became apparent that whilst lupins were considered a sustainable pulse with brilliant nutritional credentials, little had been documented about their use to improve public health. It was also interesting to discover that statistics on lupins within the UK agricultural industry go unrecorded, essentially making it a hidden crop. Lupins appeared to be the pulse with great potential, indicating a gap in the market to create something truly original.



Combining the IYP initiative and current UK market trends and demands for plant-based dietary foods, Charlotte created Blooming Food's lupin crisps. Blooming Food's lupin crisps are an innovative, uncomplicated and appetising snack, which are rich in protein and low in fat and calories. This makes them very appealing to the increasingly health conscious consumers.

Whilst Charlotte trawled through information to find sources for her project, she saw Pulse Canada's 'Mission ImPULSEible' new product competition. She emailed to ask whether she would be eligible to enter and they pointed her to the Global Pulse Confederation's #LovePulses worldwide competition.

"I felt anxious about entering because I believed the odds of me winning against entrants from potentially 193 countries was practically non-existent. It was my project supervisor Lorna White that encouraged me to enter by saying that participation in the event would be great to declare on my CV whether I got placed or not.



Further thinking

What is the difference between primary and secondary research?

What is a dissertation?

[Click here for the AUDIO FILE](#)





A few weeks later I received an email asking if I would be willing to give a talk at Food Matters Live due to my success in the competition. It was due to this email that I indirectly found out I had won first prize as the official email had gone into my spam folder!"

It was a complete shock, which is still only beginning to sink in.

"The prize included a trip to the Global Pulse Convention in Cesme, Turkey, which took place in May. There I will receive my award which will be presented by Dr Solh, Director General of ICARDA and Head of the Jury Panel for the Virtual Competition".

Charlotte then travelled to Chicago to the Institute of Food Technology, one of the largest food exhibitions where the latest global food trends, and the products and innovations designed to address them, are on display.

The crisps she created will be showcased at the exhibition which has over 23,000 attendees. It is a great opportunity to get the product and brand known.

Blooming Food has far exceeded her original objectives in producing a successful dissertation. It has evolved into an on-trend, widely appealing and commercially viable product.

Charlotte hopes to launch Blooming Food as a business after graduating. She wants to get her lupin crisps into retailers across the UK and even internationally. This would show how pulses are not only economical and sustainable, but how they also have the ability to increase public health whilst addressing future food security concerns, all in a delicious snack.

***Do not eat wild Lupins!
Most Lupins are poisonous apart from two varieties; Lupinus albus and Lupinus angustifolias.**



Further thinking

What benefits does lupins have?

Define sustainability:

What is a CV?

Click here for the
AUDIO FILE



Food Supply Chain

All your food begins its journey on a farm. This is known as the agricultural sector.

Food is then transported to a factory to go through primary and secondary processing. Food may then be stored here for some time before it is required in the retail sector. From storage, food enters the distribution sector. This is where it is transported to the shops to be sold. The retail sector is where food is sold to you, the consumer. The retail sector does not only include large supermarkets, but also small corner shops and local farmers' markets.

Your fork is the final step for the food that started off life on the farm.

Activity 1: Draw a supply chain for a chocolate bar

You will need:
Coloured pencils



Food provenance

Is knowing where food was grown, caught or raised, how your food was produced and how your food was transported.

A wide variety of foods can be grown within the United Kingdom, examples of these include:

apples – which are grown in orchards
potatoes and carrots – which are grown in fields
lettuce – which is often grown in polytunnels

In the UK we have the ideal soil and weather conditions suited to these crops, while crops like bananas or pineapples require a much hotter climate.

You will need:

A pencil

Activity 2

What other produce can be grown in the UK?



Activity 3 – Know your labels

Using the internet, what do the following Quality Assurance standards in the UK mean?

SOIL ASSOCIATION



RSPCA ASSURED



RED TRACTOR



THE LION MARK



You will need:

A pencil

We suggest you use Google.com to help you find the meaning of the labels.



Activity 4 - Continued

1. Change pen colour
2. On the left hand side of the fold, list any university courses involved in the video that match the job/careers on the right hand side and write down the entry requirements.

Courses	Jobs/Careers
<p>e.g. Agriculture at Harper Adams, 96-112 UCAS points</p>	<p>e.g. Farmer</p>



We suggested you use [UCAS.com](https://www.ucas.com) to find out where you can study different courses.



You will need:

A pencil

Mandatory and voluntary information

Food labels have both mandatory and voluntary information.

- Mandatory – this means information that must be included by law.
- Voluntary – this is information that the manufacturer includes as they feel it may be useful for the consumer. For example, 'suitable for vegetarians'.

Activity 5 - List the mandatory and voluntary information found on food products and their meaning:

Watch the video about labelling on food packaging: What's there, what does it tells us and what is the law.





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Careers in the food industry

BRAND



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When working in an NPD role you will be responsible developing new products to meet the business and customer needs. This involves collaborating with various different departments such as Technical, Marketing and Manufacturing to make sure the product is made to the correct company and customer specifications.

New Product Developer

Making a new product to the marketplace.



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Food photographers work to create and capture these beautiful and enticing images of food for magazines, cookbooks, restaurant promotional materials, and Web sites. They work with food stylists to make the food look as appetizing and aesthetically beautiful as possible

Food Photographer

Prepare food for photography, video or film.



Events Manager

Plan and organise promotional, business and social events



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Event Managers perform tasks such as finding and booking venues, liaising with clients and suppliers, handling logistics, managing budgets and invoicing, organizing accreditation, managing risk, and presenting post-event reports.



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Quality Managers ensure that all company products and services meet quality standards before they go to market. Their primary responsibilities include understanding customer expectations and needs, outlining quality standards and developing quality control processes.

Quality Manager

Responsible for the conditions of a company's services and products



Hygiene Manager

Supporting good Health and Safety practices



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Hygiene Managers are responsible for supporting good Health and Safety practices within the Food Manufacturing process, through the development of the cleaning processes and equipment used, and training provided.



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Help companies and organizations decide which products and services to sell, to which customers, at what price. They come to their conclusions by studying market conditions, competitors' activities and consumer behaviour.

Market Analyst

Look at consumer trends



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**Food Matters
Food Technology & Innovation Degrees**

Whatever you've eaten today it's likely a Harper Adams graduate helped bring that food to your plate.

With a Harper Adams degree you could become one of the 3.2 million people working in food and drink in more than 100,000 locations across the UK - not to mention the global opportunities. We work with some of the biggest names in the industry to help our students become the food technicians and scientists of the future.



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Courses:

Food and Consumer Studies BSc/BSc (Hons)
64-104 UCAS points

Food Technology and Product Development BSc/BSc (Hons)
64-104 UCAS points

Food Technology with Nutrition BSc/BSc (Hons)
64-104 UCAS points

Agri-Business BSc/BSc (Hons)
72-104 UCAS points
DMM-DDD

Agri-food Marketing with Business BSc/BSc (Hons)
72-104 UCAS points
DMM-DDD

More information about our degrees can be found on:
<https://www.harper-adams.ac.uk/courses/undergraduate/subject-areas.cfm>

Register to attend an open day:
<https://www.harper-adams.ac.uk/events/?type=2,3,4>



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**Thank you for completing your activities
around Food. We hope you enjoyed
learning more and getting creative.**

**If you would like to have a look at more of
our education packs, please visit our
website for more information.**

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