



DESIGN A NEW HOT BREAKFAST PRODUCT

TEACHER NOTES

ABOUT THIS ACTIVITY

This challenge helps students to think about the stages in food product development and how new product ideas are guided by trends and lifestyle factors within the target customer group. It provides a rapid overview of the many stages there are, and you can emphasise the stages you would like to explore more. You can adapt and extend the lesson to add as much curriculum detail as you wish, or use it as a fun way to review students' learning.

Students must choose a contemporary target group for a new fast or convenience hot food breakfast product. They should identify key trends and influences that may shape a target group's preferences and choices, and use these to guide their creative ideas for the new product. Students must then create a specification and sensory description for the new food product or item. They can develop this into a production specification for each ingredient or component, as well as a time plan or preparation specification for making the product in a fast food restaurant or for customers to heat themselves.

Students have the opportunity to think about portion size, nutrition information and the labelling they should provide for customers.

TIME REQUIRED

A double lesson (90 minutes minimum), or longer if delivered as a mini-project over several lessons. This allows more time for research and idea development, practical cookery, and shows when best to include the optional extension/homework activities from the double lesson. If you choose the mini-project approach, this activity can form the basis of a controlled assessment task.

LEARNING OUTCOMES

- ✓ To have developed ideas for new hot breakfast
- ✓ To understand importance of knowing your audience
- ✓ To identify ingredients for the product and the logistics of preparation for customers
- ✓ To understand importance of nutritional needs and information on a food product

THE GATSBY BENCHMARKS GOOD CAREER GUIDANCE

By delivering this lesson with your students you will be addressing the Gatsby Benchmarks through career and labour market information (benchmark 2) and linking curriculum learning to careers (benchmark 4).





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CURRICULUM LINKS

GCSE Food Technology topics:

- ✓ The food design process
- ✓ Food preparation
- ✓ Food production
- ✓ Marketing, labelling and packaging

National 4 in Health and Food Technology:

- ✓ Contemporary food issues – outcomes 1 and 2
- ✓ Food product development – outcomes 1 and 2

National 5 in Health and Food Technology:

- ✓ Contemporary food issues – outcomes 1 and 2
- ✓ Food product development – outcomes 1 and 2

RESOURCES NEEDED

From McDonald's website

From the Food Technology Challenge resources:

- ✓ Intro video
- ✓ Case study video
- ✓ Student activity pack (includes sheets 1–3 and McDonald's case studies)
- ✓ Vox Pops videos

From your school

You may also want to provide:

- ✓ Your preferred templates for design briefings and design
- ✓ Product and production specifications
- ✓ Students could also use nutritional software to create a nutrition profile for their product idea

PREPARATION

- ✓ Review the videos, case studies and student activity sheets
- ✓ Review the extension/homework ideas and decide which ones to include (this is most suitable if you are delivering as a mini-project, but you can set many extension ideas as a homework activity after delivering as a lesson)

KEY WORDS

Colour, Appearance, Texture, Taste, Smell, Ingredients, Nutritional value, Target group, Characteristics, Sensory analysis, Disassembly, Design brief, Design criteria, Design specification, Product specification, Product development, Evaluation, Workflow, Time plan, Primary research, Secondary research, Labelling, Production: batch, mass, continuous flow





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STARTER DELIVER AS A DOUBLE LESSON

🕒 10 MINUTES

? HOW DOES A BUSINESS DESIGN A NEW FOOD PRODUCT?

- Ask students to form small groups. Challenge them to identify and list the key steps a food product development team might take to identify an opportunity for a new food product to take their ideas from design to manufacture and marketing
- Share ideas and together agree a 'master list' of key steps

? WHAT ARE THE CURRENT BREAKFAST OPTIONS AND WHAT INFLUENCES PEOPLE'S CHOICES?

- Again working in their groups, ask students to generate as many ideas as they can for breakfast products people currently enjoy, and to list some influences on their choices
- Share ideas to create two lists: breakfast food products, and influences

▶ WATCH THE INTRO AND VOX POPS VIDEOS TO EXPLORE THE FOOD DESIGN PROCESS AT MCDONALD'S

- Watch the **Intro video**, which introduces the topic and the challenge for students
- Briefly review the challenge again using **Student Activity Sheet 3**
- Discuss why each development stage might be important and how each one contributes to McDonald's restaurants by providing consistent quality and value for their customers
- Now watch the **Vox Pops videos**, which add personal insights from McDonald's customers and employees. Ask students to briefly explain how each perspective might help them develop their own product idea





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MAIN ACTIVITIES

🕒 50 MINUTES

? HOW CAN WE DEFINE THE TARGET GROUP FOR A NEW PRODUCT?

- Explain that students will go through some of these steps and design a new hot breakfast food product – one that customers might buy ready to eat in a restaurant, or buy in a shop and prepare for themselves at home or at work
- Ask students to look at their list of breakfast foods. Why do some people tend to prefer certain choices over others? (e.g. sweet breakfast dishes or savoury?)
- Ask students to group people into different types of customer and identify things they have in common
- Establish that different target groups each have their own defining characteristics or set of influences. Using their target group ideas, asking students to identify what makes their groups unique from others, and how their breakfast food suggestions link to each group

🎯 CHOOSE A TARGET GROUP

- Review the four target customer groups on **Student Activity Sheet 1**. Ask each group of students to choose a target group for their new product, or assign them at random
- Ask students to flesh out their target group using their own ideas and experiences (this will be easier for some target groups than others!)
- Students can share their more detailed descriptions with the class, or groups can keep their insights to themselves until they present their ideas

(Modify the rest of the main activities to suit how you would like to emphasise each step or development process.)

📺 EXPLORE THE MCDONALD'S CASE STUDIES

- Watch the **Case study video**, which explores in more detail how McDonald's develops a new breakfast item. Use the **McDonald's case studies** on **Student Activity Sheet 4** to review the key steps and ideas





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GENERATE IDEAS

- Give each group time to generate initial ideas for a new breakfast food product for their target audience
- Ask each group to decide whether their product will be available in a restaurant, or bought in a shop for self-preparation
- Circulate between groups and help them to ensure their ideas remain focused around the needs of their target customers
- Help students to maintain 'healthy' brainstorming rules as they generate their initial ideas:
 - Don't rubbish an idea when it's mentioned
 - The more ideas the better
 - Build and improve each idea
 - Shortlist the best ones then choose or vote for the 'winner'

DESCRIBE YOUR PRODUCT USING A SENSORY VOCABULARY AND INGREDIENT INFORMATION

- Explain that students need to describe their product idea as fully as they can. Ask students to suggest who might need this information to help the product development process

Examples include:

- Research subjects, who might comment on ideas
- Development colleagues, who develop the product specification and manufacturing/preparation instructions
- Nutritional specialists, who advise on how to improve the nutritional qualities of the product, and provide labelling information to help customers and meet legal requirements
- Explain that students need to create a 'sensory vocabulary' to help describe their product. First, generate a list of sensory qualities a product development team might wish to describe: appearance, texture, taste, smell, etc. List these on the board
- Give each group one of these qualities and ask them to list words to describe it (e.g. a food's texture might be velvety, smooth, crunchy, chewy, soft, grainy, etc)
- Students should describe their product in detail, using their sensory vocabulary, and give their product a name that will appeal to their target market and reflects the unique qualities and benefits of the product
- Students must list the main ingredients for their products. For products that include different components (e.g. bread, a sauce, etc.). Students can separate and list these individually





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PLENARY

🕒 30 MINUTES

? HOW WILL IT BE MADE?

- Ask groups to indicate whether their product will be served ready to eat in a restaurant, or bought from a shop for the customer to prepare and heat themselves
- Now ask groups to indicate whether their idea is for an 'all-in-one' product (such as a flavoured oatmeal) or something is made of different components (e.g. a breakfast sandwich)
- Establish that each of these aspects of students' products might suggest different ways to produce their product
- Ask students to recall some main types of production process (one-off, small batch, mass, continuous flow) and briefly review each one
- Groups should outline how their product will be produced, taking into account its constituent ingredients and components, and where it will be purchased

? HOW WILL IT BE PREPARED, READY TO EAT?

- Finally, ask students to describe how to prepare the product so it's ready to serve and enjoy hot, and delivers consistent quality, taste and texture, etc.
- Again, briefly explore how this might differ for a product that's assembled in a restaurant, or one that's heated up by a customer. How might students best write a preparation guide for a restaurant employee, versus the heating instructions to go on a label?
- You may wish to explore safe reheating/holding practices for foods that will be prepared ready to eat in a restaurant



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PRESENT YOUR IDEAS

- Explain that any new product idea must go through many stages of review. With this in mind, students need to present their ideas, e.g. for a company's monthly internal 'new ideas' session
- Give students a few minutes to prepare what they will say and explain how long each group will have (e.g. one or two minutes to 'pitch' their product)
- Groups should take turns to present and justify their product idea, showing how it will appeal to their target customers and meet their needs
- Students can vote on their winning product idea (students can't vote for their own idea)

REVIEW THE FOOD PRODUCT DEVELOPMENT PROCESS

- Ask groups to recall the main steps in the food product development process, as per your discussion (ensure your earlier list isn't visible at this point)
- Ask each group to create a flow chart that shows the food development process. Groups can add steps they've not completed during this lesson, and any loops that show where feedback from research or evaluation activities is absorbed into the process

TRACK YOUR DEVELOPMENT

To help your students reflect on the skills they have used and developed in this challenge, encourage them to fill out the **Reflection Task** and **Skills Worksheet**.





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EXTENSION/HOMEWORK IDEAS

PRIMARY AND SECONDARY RESEARCH

- Discuss the range of primary and secondary research a company might undertake when developing a new food product
- Students could undertake their own research as a homework project, including interviews, a survey, gathering examples of existing products and identifying current food trends

DISASSEMBLY AND SENSORY ANALYSIS

- Students could bring a range of existing breakfast products to school (e.g. those designed for customers to heat and serve), disassemble them and conduct a sensory analysis survey of each one, using a star chart to measure each quality
- Link this activity to the sensory vocabulary you have been building during the lesson/project session

PRACTICAL COOKERY AND PRODUCT TESTING

- Students could create test versions of their product in a practical cookery session, testing their ideas on their peers or inviting members of their target audience to school
- Students can research and try different approaches to testing, including:
 - **Profiling** – e.g. using a star diagram to rate several characteristics
 - **Ranking** – rating from ‘most’ to ‘least’ for a specific quality
 - **Rating** – e.g. from 1–5 where 1 = dislike strongly and 5 = like strongly
 - **Discrimination** – looking for a detectable difference between two products
 - **Preference** – choosing one product over another
 - **Scoring** – giving a numerical score to different qualities



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FULL SPECIFICATIONS

- Students can use **Student Activity Sheet 2** as the starting point for developing full specifications at each stage of their development process:
 - Design specification
 - Production specification (including a production plan/time plan)
 - Preparation specification
- Students can use a specific approach to describing each element of their design, e.g. ACCESS FMM

HOLDING AND STORAGE

- Hot foods served in restaurants like McDonald's are tested to find the maximum holding time in which the product stays safe to eat and at the highest quality for customers to enjoy. Students could test their product and suggest safe holding times

NUTRITION AND LABELLING INFORMATION

- Students can use your school's nutrition tools (or one of many free online resources) to analyse the ingredients for their product and draw up a nutrition profile per 100g and per serving
- They can use this to write nutrition and allergy information for product packaging or customer information, and use the results to improve the nutrition profile of their product (improving its healthiness) or better meet the needs of their target customers

SOURCING

- Students can consider different sourcing options including local (e.g. reducing food miles), organic, or other food labelling schemes (e.g. Red Tractor)





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DELIVER AS A MINI-PROJECT

If you have more time available, why not deliver this challenge as an extended mini-project over a series of lessons, using pages 3-9 to help you deliver each activity?

The guide below outlines how to timetable the activities over five lessons, but you can tailor the project to suit your needs and the areas of food product development you would like to explore in most detail.

Session 1	<ul style="list-style-type: none">• How does a business design a new food product?• What are the current breakfast options and what influences people's choices?• Optional: Disassembly and sensory analysis
Session 2	<ul style="list-style-type: none">• Watch the Intro and Vox Pops video to explore McDonald's examples• How can we define the target group for a new product?• Choose a target group• Optional: Primary and secondary research
Session 3	<ul style="list-style-type: none">• Explore the McDonald's case studies• Generate ideas• Describe your product• Optional: Practical cookery and product testing (will require extra session)
Session 4	<ul style="list-style-type: none">• How will it be made?• How will it be prepared, ready to eat?• Optional: Holding and storage, Nutrition and labelling information
Session 5	<ul style="list-style-type: none">• Present your ideas• Review the food product development process

NEXT STEPS

We hope your students enjoyed the challenge!

Head to our [website](#) to start your students on our next challenge where they can learn how to **increase quality in a small café**, plus explore our full programme of free resources. If you want to explore apprenticeship opportunities available for your students at McDonald's, you can find out more [here](#).

