

Unit 9B(i) Adapted - Campaign - Designing for markets

Adapted from Unit 9B(i) Designing for markets

D&T Year 9

About the unit

The main aim of this unit is for pupils to learn about designing for the market. The design and make assignment (DMA) is set in the context of a mini-enterprise or school/craft fair. Pupils work as a team to design and make a product, identifying different roles for team members. Pupils gain the knowledge, skills and understanding they need to carry out the DMA successfully through product evaluation activities and focused practical tasks. They:

- learn how manufacturers generate and develop new ideas for products, *eg lifestyle research, prototyping*
- learn how to work as a team to carry out market research, developing a marketing campaign against a specified budget
- design a product that is suitable for manufacture in volume

In addition there is an opportunity to

- learn what is meant by 'one-off' and 'high-volume' production
- learn how quality assurance systems, *eg HACCP (hazard analysis and critical control points)*, are used during the design stage to plan safe food production and storage
- learn how ICT influences designing and manufacturing in industry, and how computer-controlled systems are used in industry and commerce

KS3 National Strategy D&T objectives

Exploring ideas and the task

Explore needs, wants and opportunities in the context of designing for markets
 Draw up a design specification for the product detailing the design criteria which reflect the user's needs
 Select information sources, gathering and sorting data that will help with ideas for, and decisions about, the design

Generating ideas

Analyse how existing products are designed and made, in order to provide a range of strategies and factual information to use when designing

Planning

Review progress against plans at important stages of the task
 Choose to adopt a role within a group ie leader, designer

Expectations

At the end of this unit

most pupils will: give reasons for their choice of role within a team; link the development of a product to users' needs and explain any changes to the design proposal; make effective use of a range of strategies to generate design ideas, including modelling to explore and test their thinking; use a range of techniques skilfully during trialling and production; work from detailed plans that they have produced; adapt their methods of manufacture to changing circumstances that batch or volume production requires; understand the importance of quality assurance and control; evaluate how they have achieved their original design proposals and make recommendations for further development of the product.

some pupils will not have made so much progress and will: explain why different roles are needed in a team; identify some users' needs; clarify their ideas through discussion and modelling and give reasons for choosing between ideas; produce a step-by-step plan and communicate alternative ideas; work safely and with some accuracy with a range of resources; show an awareness of quality assurance and control; compare their product with the design specification and identify successful and weak parts of their work.

some pupils will have progressed further and will: describe accurately how team members can be organised to suit their skills and abilities; identify a product to be made; show a good understanding of how their product could be produced in the required quantity and to the required quality, and users' safety needs, when generating ideas; develop detailed criteria for their designs and use these to formulate design proposals; produce realistic and appropriate ideas to meet their specifications, noting sensible reasons for choosing their ideas; communicate in some detail the planned making processes; explain how quality control and assurance procedures were developed and applied; and record judgements about quality assurance; choose and use suitable criteria (including user opinion and practical testing) to evaluate the performance of their design ideas and their product in development, and implement suggested improvements.

- essential activities
- optional activities

Prior learning

It is helpful if pupils have:

- learnt about batch production, including how to develop a basic design that can be varied or personalised for particular clients
- used ICT to help design and make single items and small batches, when appropriate, and used spreadsheets to help them with costing and scaling up
- used manufacturing aids, *eg moulds and templates*, to help with volume production
- learnt that making identical parts in a batch is cost effective and ensures accuracy

Language for learning

Through the activities in this unit, pupils will be able to understand, use and spell correctly words relating to:

- designing for markets, *eg business, marketing, manager, mini-enterprise, teamwork, roles, responsibility, entrepreneur, entrepreneurial, organic, impact, environment, profit, cost, user research, product research, new product development*
- manufacture, *eg manufacturer, factory, quality assurance, quality control, flow chart, one-off, high volume,*

Speaking and listening - through the activities pupils could:

- solve a problem, consider alternatives, structure plans and organise group activity

Writing - through the activities pupils could:

- understand the effect of different aspects of formality, *eg passive verbs, third person, abstract nouns*

Resources

Resources include:

Campaign Interactive website

www.bmesonline.org.uk/interactives.htm#

BMES resources www.bmesonline.org.uk/downloads.htm

MVM 7 (2002) Developing a food advertising campaign

Pizza poster information sheets - Club Pizza (for example, Shaun: market research)

Food photo file

Tuck in Teaching resource

Fast Food Diner

Porkmeat Pathfinders

- the local education business partnership to find out about resources and local contacts
- useful websites, eg
 - www.dtonline.org.
 - www.cant.ac.uk/mbd/
 - www.design-council.org.uk

Out-of-school activities and homework

Pupils could:

- investigate the structure of a local manufacturing company, *eg after a class visit or after watching a video*
- draw up a flow chart showing the production plan for a product
- carry out a product analysis of existing products that are similar to the one they are designing
- evaluate their role in the team (after the design and make assignment)
- prepare the marketing material for their product

Links with other subjects

- ICT: using a range of ICT applications, using CAD/CAM (computer-aided design and manufacture), exploring the influence of ICT on the manufacturing industry and commerce.
- Business studies - marketing, costing and business planning
- English: producing plans.

■ essential activities
● optional activities

Learning Objectives Pupils Should Learn	Possible Teaching Activities	Learning Outcomes Pupils	Points to Note
<p>DESIGN AND MAKE ASSIGNMENT (DMA)</p> <ul style="list-style-type: none"> ● to work successfully as a team to carry out market research, developing a marketing campaign against a specified budget and to design for high-volume manufacturing 	<p>Set the pupils a DMA in which they:</p> <ul style="list-style-type: none"> - identify the need for a product and a group of people who might use it - identify roles for their team members - design a product that users want - think about how designing for high-volume manufacturing brings new considerations and constraints for a designer - develop and make prototypes of the product, to ensure that it can be manufactured easily - develop a marketing campaign to promote the product successfully - make the product efficiently and ensure high quality <p>Mini-enterprise Identify the need for a new product and think about the group of people who might use it. Develop a research and marketing campaign as a team. Design and manufacture the product in volume, making sufficient quantities to meet expected demand.</p> <p>Designer-makers Design and make a simple product to sell at a craft fair. The product must be suitable for batch production. Your design and any decoration need to be simple, so that it is easy to manufacture. Develop a research and marketing campaign as a team.</p>	<ul style="list-style-type: none"> ● select information sources, deciding which will help them with ideas for their design ● seek the opinions of potential users of the product ● consider the impact of a solution on users ● refine a single idea from a range of ideas ● resolve conflicting demands when proposing design ideas ● consider whether a product is marketable, maintainable and sustainable when generating ideas ● use a range of ICT to help them generate ideas ● produce plans that predict the time needed to carry out the main stages of making <ul style="list-style-type: none"> ● collate, interpret and present product information to a client ● work effectively within a team, discussing and responding to information, working on designing and making aspects, and reviewing product outcomes 	<p>Health and safety - if food products are made to be sold, then teachers must ensure that the relevant food safety procedures are followed, and premises need to be registered</p> <div style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <ul style="list-style-type: none"> ■ essential activities ● optional activities </div>

Learning Objectives Pupils Should Learn	Possible Teaching Activities	Learning Outcomes Pupils	Points to Note
<h2>PRODUCT EVALUATION ACTIVITIES</h2> <h3>How are new products researched and developed?</h3>			
<ul style="list-style-type: none"> ■ about the scale of new product development and the criteria that can be used to judge and compare new products, <i>eg how far they meet needs; their social, economic and environmental impact</i> 	<p>In 1998, over 7,000 new food and drink products were introduced to the British market alone - about 135 each week.</p> <ul style="list-style-type: none"> ■ Discuss with the pupils why so many food products are introduced. ■ Ask them to find out how many new types of products are developed in different sectors of the industry, <i>eg chilled, frozen and organic foods.</i> ■ Discuss how long the products survive before being replaced by a new or improved version. Ask the pupils to review one food product that has been introduced recently, to discuss the need it was designed to meet, and to consider how far it meets those needs and its impact on society 	<ul style="list-style-type: none"> ■ give three reasons why there are so many new products, explain why some of these products fail or are replaced regularly, and use simple criteria to compare products 	
<h3>What is the difference between one-off and high volume products?</h3>			
<ul style="list-style-type: none"> ■ how different products are made as a one-off or in high volume ■ how to compare one-off and high-volume products 	<ul style="list-style-type: none"> ■ Talk to the pupils about how well particular products are suited to manufacture in large volume. Discuss how different products are made in different ways, <i>eg</i> <ul style="list-style-type: none"> - <i>a decorated cake is made for a special event (a one-off)</i> - <i>a ready-prepared meal may be made as a batch or in higher volume</i> - <i>formed foods, such as chicken shapes and biscuits, can be made in vast quantities and each one that comes off the production line is exactly the same as others (high-volume production)</i> ■ Ask the pupils to compare hand-made and high-volume products using these questions: <ul style="list-style-type: none"> - <i>How is the product designed so that it is suitable for low-volume or high-volume production?</i> - <i>What are the costs of the materials/ingredients, labour, tools and equipment needed to make the product?</i> 	<ul style="list-style-type: none"> ■ describe one or two differences between a one-off and a high-volume product, and give four examples of one-off products and four examples of high-volume products ■ compare one-off and high-volume products in terms of differences, <i>eg design features, cost, tools and equipment used, quality</i> 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto; margin-right: auto;"> <ul style="list-style-type: none"> ■ essential activities ● optional activities </div>

Learning Objectives Pupils Should Learn	Possible Teaching Activities	Learning Outcomes Pupils	Points to Note
What is made or manufactured in our local area? How has this changed over time?			
<ul style="list-style-type: none"> ■ how local manufacturing has changed over time 	<ul style="list-style-type: none"> ■ A century ago, most manufacturing took place where there was a local supply of raw materials and people with the necessary skills. Ask the pupils to find out what products were produced in the local area, where the resources came from, and where the products went to. Ask the pupils and discuss with them why many companies are international and have factories in different countries. 	<ul style="list-style-type: none"> ■ describe manufacturing in the local area a century ago, and explain how it has changed since 	<p>Language for learning when going on a visit</p> <ul style="list-style-type: none"> ● Ask pupils to make notes during a visit or when listening to a speaker. Pupils could discuss the key areas of interest in groups or as a class, talking about appropriate questions to ask. They should be encouraged to use good note-taking strategies, <i>eg bullet points, sub-headings, underlining.</i>
<ul style="list-style-type: none"> ■ how ICT influences manufacturing in industry and how computer-controlled systems are used in industry and commerce 	<ul style="list-style-type: none"> ■ Visit a local company to see how a product is designed and manufactured and how ICT influences manufacturing in industry. If a visit to a local company cannot be arranged, pupils could watch a video or slide show, or go on a virtual visit using the internet site of a manufacturer. 	<ul style="list-style-type: none"> ■ talk about how a local company produces a product, <i>eg what it makes, the materials/ingredients, tools and equipment that it uses, including ICT</i> 	
<ul style="list-style-type: none"> ● about local manufacturing industries and businesses, and how they combine business skills with designing skills 	<ul style="list-style-type: none"> ● Ask the pupils: <ul style="list-style-type: none"> - <i>What products are made in the local area?</i> - <i>Do you know anyone involved in manufacturing?</i> - <i>What do they do?</i> Ask a speaker, <i>eg a local company manager, a small business unit manager, an ex-pupil who now runs a successful local business</i>, to give the pupils advice on running a business. 	<ul style="list-style-type: none"> ● name one product that is made in the local area and give the name of the company that makes it; describe the structure of the company and the roles of people who work there 	
			<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <ul style="list-style-type: none"> ■ essential activities ● optional activities </div>

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<h2 style="margin: 0;">FOCUSED PRACTICAL TASKS (FPTs)</h2> <h3 style="margin: 0;">Developing a campaign as a team</h3>			
<ul style="list-style-type: none"> ■ how companies are made up of team members with particular roles and responsibilities 	<ul style="list-style-type: none"> ■ Discuss with the pupils the different roles required to run a successful business. Ask teams of pupils to talk about the best roles for each team member, <i>eg project manager, finance manager, personnel manager, production manager, marketing manager</i>, and what the main tasks for each might be. Ask the pupils to think about each other's skills and abilities, but remind them that the roles need to be flexible because of varying workloads. 	<ul style="list-style-type: none"> ■ list the main roles and responsibilities of three different types of managers in a company, and decide which role would suit which team member, according to their skills 	<p>Language for learning in group discussion</p> <ul style="list-style-type: none"> ● Ask the whole class to discuss the range of managerial roles in a successful business and to develop basic role definitions for each kind of manager. Then, in teams of five, six or seven, the pupils discuss what each manager's tasks might be in their project, and what qualities and skills they might need, <i>eg a finance manager should be numerate, able to estimate and able to use spreadsheets.</i> ● Ask pupils to write brief notes on which role might suit them and which they would like, and use these to come to a team decision on who should do what. Teamwork like this needs a chair or facilitator, and someone to keep a careful note of decisions.
			<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <ul style="list-style-type: none"> ■ essential activities ● optional activities </div>

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<p>How to carry out market research</p> <ul style="list-style-type: none"> ● how user research helps designers to develop products that meet users' needs 	<ul style="list-style-type: none"> ● Discuss with the pupils how to identify the users of a particular product, and how to research what they want, through product research and user research, <i>eg by finding out what other businesses are producing, comparing existing products, asking potential customers to test products, providing questionnaires for potential users.</i> ● Use the Campaign Interactive - Scene 1 The Advertising Agency ■ Ask pupils to use this interactive activity in which they choose a sample size and closed questions for a questionnaire, interpret the pie/bar charts. ■ Ask pupils for additional 'closed' questions which could be asked. Explain when it would be possible to use more open questions and why they might be used. ■ Ask the pupils if they found it helpful to have the analysis presented as a bar chart or pie chart, for example, could they see trends more easily? ■ Ask the pupils to clarify what is meant by the terms used in the interactive - consumer research, qualitative and quantitative research, sample size, open and closed questions ■ Ask the pupils to develop their own consumer research for the product they are developing for their mini enterprise <p><i>Who will they ask?</i></p> <p><i>How many people will they ask?</i></p> <p><i>What closed questions will be suitable? What do they need to find out?</i></p> <p><i>How will they present their results?</i></p>	<ul style="list-style-type: none"> ● carry out simple product research and user research to identify users and what they want, <i>eg carry out a survey or observation of users</i> 	<p>There is a lesson plan that supports this activity</p> <div data-bbox="1870 1404 2139 1492" style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <ul style="list-style-type: none"> ■ essential activities ● optional activities </div>

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<h2>How to create a marketing campaign</h2> <p>How a marketing brief is created</p>	<p>Developing a marketing brief <i>Use the Campaign Interactive Scene 2 Creative brief</i></p> <ul style="list-style-type: none"> ■ Ask the pupils to use the interactive to develop a creative brief. They have to choose relevant statements for the brief, for example, what is the advertising required to do? What is the proposition? What are the target audience? What should be the tone or voice for the adverts? ■ Ask the pupils to develop the creative brief for their own product using the same headings/questions 	<p>Develop a marketing brief for their own product, taking into account what they require the advertising to do and the target audience</p>	
<p>How to develop and model an effective magazine advert for a food product</p>	<p>Creating a virtual magazine advert <i>Use the Campaign Interactive Scene 3 Desktop publishing</i></p> <ul style="list-style-type: none"> ■ Ask the pupils to use the interactive to develop and model their ideas for a magazine advert - choosing the photo, logo, font and text ■ Ask the pupils to show their adverts to the group and evaluate the use of the photo, the text and overall visual effect. ■ Ask the pupils to collect examples of food magazine adverts and describe which ones they think are most effective <i>Who are they aimed at?</i> <i>What is the visual impact of the photo?</i> <i>Is there a memorable slogan?</i> <i>What could improve the advert?</i> <i>What are the legal requirements for a food product advert?</i> 	<p>Create their own food advert for a magazine with appropriate photos, font, text and layout.</p> <p>Understand the legal requirements of food advertising, for example, claims.</p> <p>Evaluate existing adverts for effectiveness and use their findings to develop their own adverts</p>	
<p>Forms of advertising available and their effectiveness</p>	<p>Costing an advertising campaign <i>Use the Campaign Interactive Scene 4 The campaign</i></p> <ul style="list-style-type: none"> ● Ask pupils what types of advertising can be used and which ones they think are most expensive to produce, and most effective to use for advertising food products. ● Ask pupil to use the interactive to plan an advertising campaign within a set budget. 	<p>Choose forms of advertising that are appropriate and within a set budget</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto;"> <ul style="list-style-type: none"> ■ essential activities ● optional activities </div>

Learning Objectives Pupils Should Learn	Possible Teaching Activities	Learning Outcomes Pupils	Points to Note
<h2>Planning and making - mini enterprise</h2>			
<ul style="list-style-type: none"> ■ about the differences between one-off and high-volume production, and the meaning of continuous and repetitive flow 	<ul style="list-style-type: none"> ■ Ask a group of pupils to make a batch of identical, ready-designed products, using different methods, <i>eg</i> <ul style="list-style-type: none"> - <i>an individual working with hand-tools</i> - <i>an individual using a mixer</i> - <i>a group working as a production line</i> - <i>a group working as a production cell</i> <p>Ask different groups to use different methods and to compare the time taken to make 10 items using each method. The product should include multiple processes, eg a biscuit that is decorated.</p> <ul style="list-style-type: none"> ● Discuss with the pupils ways of making a product in high volume, or use case studies to talk about how production could be faster, more cost effective and of a higher quality. 	<ul style="list-style-type: none"> ■ give one example of how a manufacturer could produce an item more quickly, more cost effectively or of a higher quality 	
<ul style="list-style-type: none"> ● how production plans can be broken down into simple stages and represented as a flow chart 	<ul style="list-style-type: none"> ● Ask the pupils to describe how a product is made, by breaking the process down into tasks and drawing a simple flow chart. 	<ul style="list-style-type: none"> ● describe how a product is made, breaking the process down into the main stages and representing the information as a simple flow chart 	
<h2>Evaluating</h2> <p>How market analysis is used to judge the effectiveness of a marketing campaign</p>	<p>Evaluating an advertising campaign</p> <p><i>Use Campaign interactive Scene 5 Success of the Campaign</i></p> <ul style="list-style-type: none"> ● Ask pupils to use the interactive to analyse how successful the campaign was in terms of market figures. What does this analysis tell them? 	<p>Interpret market information and evaluate how effective the campaign was in reaching its goals.</p>	<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <ul style="list-style-type: none"> ■ essential activities ● optional activities </div>