



General Certificate of Education

Design and Technology: Food Technology 5541/6541

FTY3

Mark Scheme

2007 examination - June series

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1 (a) From a dietary point of view, explain why food manufacturers would include fruit and/or vegetables in their regional food product.

Subject content

Five portions of fruit and vegetables per day campaign.
 Consumption of fruit and vegetables has been shown in scientific studies to result in people having a lower risk of diseases such as some types of cancer or heart disease.
 A significant number of people in the UK do not eat enough fruit and vegetables despite the health benefits.

Nutritional content –

- vitamins, for example, Vitamin C in green peppers
- minerals, for example, iron in green leafy vegetables
- carbohydrate, for example, sweet potatoes

Contain antioxidants

NSP content

Low fat content important for low fat diets.

Low saturated fat content.

Low energy compared to other foods, which is important for weight reduction diets.

Can make a product more attractive because of the range of colours, flavours and textures.

Wide variety including green vegetables, root vegetables, legumes, citrus fruit, soft fruit etc.

More varieties available from all over the world, due to better transport.

Wider range of fruit and vegetables grown in the UK.

Trend towards vegetarianism.

Range of preserved fruit and vegetables.

Can be used raw or cooked.

Can be purchased pre-prepared, e.g. peeled.

Consumers are more educated / aware about why we should consume more fruit and vegetables.

Part of a balanced diet because, e.g. vitamins.

Mark allocation

Explanation	Mark range
1 reason briefly discussed or 2 or 3 briefly outlined	1 – 3
2 reasons discussed or 3 or 4 briefly discussed	4 – 6
3 or more reasons are soundly and accurately discussed in detail to show a clear understanding	7 – 10

(10 marks)

(b) Discuss the reasons for the increasing demand for regional food products.

Subject content

An increasing interest in the UK for regional produce. It is being used to a greater extent in restaurants, pubs, tea rooms, bed and breakfast businesses, etcetera. Tourists, both from the UK and abroad, are increasingly interested in trying regionally produced food products.

Jamie Oliver recommended the use of more regional produce for the production of school meals.

There has been an increase in the number of food related festivals within the UK.

British Food Fortnight is an opportunity for consumers to find out about the food and drink produced in their region.

Local food networks provide a greater access to fresh seasonal produce.

Consumers can help the environment by buying regional produce. This can reduce food miles and, in particular, road miles within the UK = reduction in global warming, reduction in carbon footprint. Less packaging will be needed to protect food from damage in transit and changes in temperature. There should be less waste.

Consumers can eat seasonal produce.

It is good for the local economy, keeping money in the regional area.

Food should be fresher, containing more nutrients.

Helps to foster a sense of community.

Helps farmers who are trying to compete with cheap imports.

Can make food safer by reducing the risk from accidental or malicious contamination.

Consumers can enjoy traditional foods and regional specialities.

Consumers are constantly interested in new products to add variety to their diet.

Consumers are more educated / aware of and interested in food and where it has come from, e.g. travel abroad / move abroad.

More choice now available in shops.

Season – must explain.

Fresher

Mark allocation

Explanation	Mark range
Little or basic knowledge of why there is an increasing demand for regional products 1 reason may be explained or 2 or 3 briefly outlined	1 – 3
Some knowledge of why there is an increasing demand for regional products 3 or 4 reasons may be outlined	4 – 6
Sound and accurate knowledge of why there is an increasing demand for regional products 4 or 5 reasons discussed accurately and in detail (to achieve at this level candidates must discuss)	7 – 10

(10 marks)

2 You have been asked to design a regional food product that

- shows an innovative use of at least one regional ingredient
- will appeal to adults
- considers current healthy eating guidelines
- is suitable to be stored chilled
- will be a single portion.

(a) On sheet 1, sketch and annotate four different possible initial design ideas for regional food products that take into account the above criteria.

Subject Content

Each sketch should reflect the general design criteria:

- is a regional food product
- shows an innovative use of at least one regional ingredient
- will appeal to adults
- considers current healthy eating guidelines
- is suitable to be stored chilled
- will be a single portion.

Each initial idea must be a different product and **not** a variation of the same product.

Each initial idea should be communicated using a sketch which could be 2D, 3D, cross section etc.

Each sketch should be annotated, named and, to achieve the higher marks, there should be some explanation / discussion of how the idea meets the criteria.

Mark allocation per initial design idea (4 x 8 marks)

Explanation	Mark range
Sketch is difficult to recognize, has no annotation and initial idea may not reflect the design criteria	1 – 2
Sketch is recognizable, annotated and reflects some of the design criteria	3 – 5
Sketch is recognizable, annotated in detail to explain / discuss how the idea meets the design criteria	6 – 8

N.B. if no sketch for an idea, no marks can be allocated.

(4 x 8 marks)

- (b) Select your most promising design and develop it further to illustrate your final design proposal on sheet 2.**

In this question marks will be awarded for:

- (i) quality of communication;**

Subject content

Assess the quality of communication of the development of the final design proposal. Communication should show the use of a range of methods, including text, diagrams and annotation.

Mark allocation

Explanation	Mark range
Basic level of communication skills resulting in limited development	1 – 2
Good level of communication skills resulting in appropriate development	3 – 4
High level of communication skills resulting in clear and accurate development	5 – 6

(6 marks)

- (ii) ingredients/materials to be used;**

Subject content

Assess the selection of materials for the development of the final design proposal. Materials should be described to show the quantities, types, pre-preparation etc.

Mark allocation

Explanation	Mark range
Limited description of materials, some of which may not be appropriate	1 – 3
Adequate description of appropriate materials	4 – 6
Clear and articulate description of appropriate materials	7 – 8

(8 marks)

(iii) originality/innovation of the product;

Subject content

Assess the originality / innovation of the development of the final design proposal.

Mark allocation

Explanation	Mark range
Little originality / innovation The design is already available in supermarkets / other shops	1 – 2
Some originality / innovation The design is similar or a variation of a product already available in supermarkets / other shops	3 – 4
Good originality / innovation The design is not already available in supermarkets / other shops	5 – 6

(6 marks)

(iv) development of chosen item.

Subject content

Assess the development of the chosen design as a regional food product.

Mark allocation

Explanation	Mark range
Limited evidence to show development of chosen idea that does not always reflect the general design criteria	1 – 4
Evidence to show good development of chosen idea that reflects the general design criteria	5 – 9
Evidence to show considerable development of chosen idea that reflects the general design criteria including sketches and explanation / discussion resulting in a realistic and appropriate solution	10 - 14

(14 marks)

- (c) **Describe how a food manufacturer could use the minimum amount of packaging for regional food products.**

Subject content

Packaging should be the correct size for the product.
 Packaging should use minimum resources; for example, the candidate may describe the use of a card overlay rather than a box or a sticky label.
 Multi packs with an outer packaging should be avoided.
 Use of minimum quantity of materials.
 Use of minimum amount of energy in the production of materials.
 Use of recycled materials where appropriate (not in direct contact with food).
 Use of thinner but stronger materials.
 Recycle
 Re-use e.g. basket
 Wrap products together, not individual product.
 Simple shape of product and / or packaging to reduce waste.

Mark allocation

Explanation	Mark range
Limited description of how a food manufacturer would use the minimum amount of packaging for a regional food product	1 – 3
Adequate description of how a food manufacturer would use the minimum amount of packaging	4 – 7
Clear and full description of how a food manufacturer would use the minimum amount of packaging	8 – 10

(10 marks)

Quality of Written Communication

The following marks are allocated to the quality of the candidate's written communication. Make a separate assessment of the candidate's overall ability as demonstrated across the paper using the criteria given below.

<i>Performance Criteria</i>	Marks
The candidate will express complex ideas extremely clearly and fluently. Sentences and paragraphs will follow on from one another smoothly and logically. Arguments will be consistently relevant and well structured.	
There will be few, if any, errors of grammar, punctuation and spelling.	4
The candidate will express moderately complex ideas clearly and reasonably fluently, through well-lined sentences and paragraphs. Arguments will be generally relevant and well structured. There may be occasional errors of grammar, punctuation and spelling.	3
The candidate will express straightforward ideas clearly, if not always fluently. Sentences and paragraphs may not always be well connected. Arguments may sometimes stray from the point or be weakly presented. There may be some errors of grammar, punctuation and spelling, but not such as to suggest a weakness in these areas.	2
The candidate will express simple ideas clearly, but may be imprecise and awkward in dealing with complex or subtle concepts. Arguments may be of doubtful relevance or obscurely presented. Errors in grammar, punctuation and spelling may be noticeable and intrusive, suggesting weaknesses in these areas.	1