



Design and Technology

GCSE

D&T: Food Technology: Testing, Analysing and Evaluating

Topic Exploration Pack

September 2015

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This Topic Exploration Pack should accompany the OCR resource ‘Testing, Analysing and Evaluating’ learner activities, which you can download from the OCR website.



This activity offers an opportunity for English skills development.



Testing, Analysing and Evaluating

Candidates will be required to develop skills in testing, evaluating and analysing in various aspects of the specification, including in their controlled assessment and in the written examination.

Controlled assessment

Clear reference to these skills is made in the controlled assessment.

In A521 Introduction to designing and making where candidates are required to:

- Identify trends in existing products and fully evaluate them against the needs of the intended user.
- Evaluate the food prototype through detailed testing against the design specification.
- Present meaningful conclusions leading to suggestions for possible improvements.

In A523 Making Quality Products candidates are required to:

- Evaluate their dishes in relation to the specification and when developing the product to be able to evaluate how successful the modifications were.
- Evaluate through detailed testing against the product specification.
- Present meaningful conclusions leading to suggestions for possible improvements.

In both pieces of controlled assessment candidates ask users to taste products and they record their findings.

Written examination

In the written examination there are many examples of where these skills are tested as well as through subject specific content such as in the following sections:

Design process

- Generate, record and model design ideas, understanding the relevance of function and aesthetics (taste, texture and appearance).

Product development

- Being able to match ingredients and components with tools, equipment and processes when deciding how to make the product.

Product planning

- Critically evaluate products and suggest modifications.
- Sensory analysis including rating/ranking. Record results in appropriate ways (star profiles and charts).

Product analysis

- Determine the suitability of a product for an intended market.

In addition candidates may be asked to evaluate the suitability of products etc.



This pack is intended to provide you with some resources and activities that can support students learning and will help them succeed in both the controlled assessment and the written examination.

Activity 1 – Sensory Analysis

This activity consists of students carrying out a range of sensory analysis on products using the different methods of sensory analysis:

Rating test - using opinions extremely dislike to like very much

Ranking - either in order of preference for a particular attribute or as a product as a whole (hedonic ranking)

Triangle test - taste the difference between products = spot the odd one out

Star profiles - (can be done on a spread sheet and put into a star chart) to rate different elements of a product.

The products used are dependent on other activities being taught at the time. Students to be given a variety of suitable foods to be tested. They should be encouraged to test the foods in controlled conditions. This can then be used as a revision activity in preparation for the controlled assessments when they need to evaluate the sensory properties of products and for completing the past exam paper questions.

Objectives

- To introduce the students to the different types of sensory analysis
- To understand how sensory analysis is carried out in industry

Resources

- Worksheet 1 - sensory analysis charts
- Worksheet 8 - tasting words
- Foods to taste
- Past exam paper questions linked to sensory analysis (A524 June 2013, A525 June 2014).

Links to resources which are useful when teaching evaluation -

Sensory analysis - Provides a clear definitions of the different types of sensory testing

<http://www.foodafactoflife.org.uk/sheet.aspx?siteId=20§ionId=85&contentId=329>

Sensory analysis a teacher's guide

<http://www.foodafactoflife.org.uk/attachments/276dbf05-695c-44942bb55825.pdf>



Activity 2

The aim of this activity is to enable students to analyse products, this will help them when they are completing their controlled assessment when they look at the suitability of products against the identified needs of the user.

This activity is broken down into several stages they could be done separately or as a mini project.

Task A

Objectives

- Students will be able to evaluate products against a set of identified needs.
- They will be able to draw conclusions from these which will help them to formulate a design specification.

Resources

- Worksheet 2 - design brief and identified needs.
- Worksheet 3 - Pre populated identified needs chart.
- Worksheet 4 - blank identified needs chart.
- Worksheet 5 - Exemplar grade A and C - evaluating existing products against identified needs.
- Food product labels.
- Foods to taste – options.

Students are given the Worksheet 2 which has the design brief and identified needs. Although the sheets detailed use soup these could be changed for a different product.

Students are then given either a blank table (Worksheet 4) or for lower ability students a pre-populated table (Worksheet 3)and asked to evaluate the products against the identified needs. This could be done purely from the packaging, however the learning from activity 1 could be reinforced if it was possible for the students to taste the products. When they have completed this they should. Write a detailed conclusion explaining what they have found out and how it will affect their design specification for a new soup product. Remind students to give detailed reasons for what they say - using connectives to ensure reasons are added.

Two examples grade A and C have been included which could be given to students to look at (Worksheet 5). They are taken from an OCR resource which has been used when training materials were produced for this specification.



Task B

This activity continues to build on students evaluation skills, used when looking at products. They will need to evaluate products against identified needs when completing Unit 521 controlled assessment. It will also allow them to consolidate their sensory analysis skills. Students will be required to select a food product and to evaluate it in detail against the identified needs. Students may find that they are able to write more detailed responses if they are able to taste the products. Please note tasting the product is not a requirement for their controlled assessment. See Worksheet 2

Choose two of the soup products and evaluate them in detail. This needs to include:-

- A photograph of the product.
- Detailed recording and evaluation of the tasting (you could include a star chart or a tasting chart).
- A detailed analysis of the product paying particular attention to the identified needs of the intended user.

An extension task for the more able students would be to compare nutritional information in several of the soups and make additional judgements based on comparing values.

Objectives

- To be able to evaluate in details products against identified needs.
- To select an appropriate way to display results from the evaluation and tasting session.

Resources

- Worksheet 2 - Identified needs from research. The same identified needs from the Task 2a could be used.
- Soup to taste.
- Worksheet 6 - For lower ability recording sheets pre populated for the students.
- Worksheet 7 - Exemplar of A grade and grade work from controlled assessments.



Activity 3

Students will need to learn how to evaluate products they make against a specification. In the case of Unit A521 it is against their design specification, in Unit A523 they evaluate their first four products against their design specification, but with their final product it is evaluated against the product specification.

Students will require a design specification to work from. This could be one developed from the work done on soups in the Activity 2 or you or they could write a specification for a product that they want to work on for this activity. A specification for the soup is provided below and on Activity sheet 4 where there is a suggested lay out for the activity. This also includes other information which has to be included in Unit A521. Please remember for the controlled assessments, making just soups would be too narrow a focus, candidates are required to demonstrate a wide range of skills.

A soup is used here as it is often easier to have all of the group doing the same at this point in the teaching.

Design Specification for Soup

To be suitable for teenagers.

To be reduced in fat.

To contain protein.

To be able to be reheated in under 8 minutes.

To be colourful.

To contain a variety of textures.

To be able to taste the flavours of the main vegetables used.

To be tasty – seasoned.

For the more able students they can devise their own sheets which must include the following information:

Original recipe and adapted recipe.

Skills being used.

Adaptations with clear explanations.

Sensory analysis.

Nutritional analysis.

Evaluation against the specification.



An example of A grade and C/D Grade work is included for students to reference which has been taken from OCR Training materials for Unit A521 (worksheet 8). A blank sheet (worksheet 9) which could be used by students in also included, however you might want to get students to devise their own and this could then be used as a template for their controlled assessment when they are doing the design sections for unit A521. A bank of sensory analysis words (worksheet 10) is included.

Objectives

- To be able to independently analyse a specification and adapt a recipe to meet the specification.
- To carry out sensory analysis of the product and identify further improvements. (the more able students will be able to explain how these can be carried out).
- To evaluate in detail a product against a specification.

Resources

- Worksheet 8 - Exemplar work Grade A.
- Worksheet 9 - Planning sheet for less able students.
- Worksheet 10 - Tasting word bank.

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