



GENERAL CERTIFICATE OF SECONDARY EDUCATION
DESIGN AND TECHNOLOGY
PRODUCT DESIGN

A552/IT

Designing and Making Innovation Challenge

PRE-RELEASE INSTRUCTIONS FOR TEACHERS

JANUARY AND JUNE 2010

To be opened on receipt



INSTRUCTIONS TO TEACHERS

- The information contained within this pre-release material is designed to allow centres to carry out the following tasks:
 - Assemble a handling collection linked to the chosen situation. The 'handling collection' may consist of existing products, pictures or video that are linked to the situation.
 - Assemble an 'inspirational table' which shows examples of products with interesting features or capabilities. These may not necessarily be linked to the situation.
 - Develop a range of modelling/prototyping materials that will be suitable for the given situation. The structure of the examination allows staff/students to obtain additional materials/ingredients between session one and session two if required.
- OCR places no restrictions on the nature of the collection provided to the candidates. It is essential, however, that the items, whilst being appropriate, are not, by their very nature, suitable for copying by the candidates in order to provide a workable solution to the challenge.
- On the day of the examination four separate 'challenges' will be given to the candidates. The candidates will select **one** 'challenge' to respond to.
- Please read this document in conjunction with Teachers Notes (TN).
- This document consists of **4** pages. Any blank pages are indicated.

The Designing and Making Innovation Challenge is a teacher-led activity that stimulates and supports the candidate through a thought-provoking creative exercise.

The activity is designed to take place in a design room, studio or workshop (not the centre's examination hall). The candidates are encouraged to take risks, be innovative, take advice from others through controlled and structured peer evaluation, and use resources effectively and efficiently.

Candidates have a choice of four different challenges.

Each of these challenges will have a different focus and will require the use of appropriate modelling materials. If, for example, a food focus is chosen then the facilities provided will be obviously different to those provided for challenge based around the use of resistant materials. It is advisable, therefore, to provide different working environments for each challenge. Full instructions concerning the conduct and pace for running this unit in a centre are provided in the document titled Teachers Notes supplied with this IT.

The centre is asked to provide a 'handling collection', which may consist of existing products or pictures, video, etc relating to the situation, and an 'inspirational table' which shows examples of products with interesting features or capabilities. Throughout the challenge, candidates are asked to record and communicate their thinking on a pre-printed, A4-size answer booklet supplied by OCR. Candidates respond to the prompts in pre-numbered boxes.

Midway through session 1, candidates have the opportunity to present their ideas to a group of between three and four other candidates. Candidates are encouraged to take advice from others through this controlled and structured peer evaluation. Candidates model their most creative and exciting idea using a range of easy-to-handle materials. Depending upon the chosen challenge, candidates choose from paper, card, thin plastics, thin sections of wood, fabric, wire, foil, thin metal sheet, clay, polymorph, foam board, food ingredients, mechanical and electrical/electronic components, gaffer tape and other joining methods and devices.

Marks are awarded for the design concept and the way in which the candidate has resourcefully used materials and construction techniques. Four digital photographs must be taken at specified times by the teacher or teaching and learning assistant to record individual progress. These must be processed and attached to each candidate's answer booklet during the challenge.

Although prototype models are not required to be sent with the candidate answer booklets to the examiner, they should be retained as they may be required for monitoring purposes. At the end of session 2, candidates have the opportunity to reflect on the challenge by completing a section in the answer booklet.

SCHOOL SPORTS DAY**Situation:**

On a school sports day, not all students participate in the sporting events. The opportunities for these students still to be involved and support the event and its arrangements are numerous.

Four separate challenges will be provided on the day of the examination. Candidates will need to select **one** challenge to respond to.

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